AGENDA
CITY OF ST. CHARLES
PLANNING & DEVELOPMENT COMMITTEE
ALD. CLIFF CARRIGNAN – CHAIRMAN

MONDAY, JULY 16, 2012 - 7:05 PM
IMMEDIATELY FOLLOWING GOVERNMENT OPERATION MEETING
CITY COUNCIL CHAMBERS
2 E. MAIN STREET

1. CALL TO ORDER

2. ROLL CALL

3. COMMUNITY DEVELOPMENT

a. Recommend approval of a Special Use on a portion of the property located at 2900 Dukane Drive for Manufacturing, Heavy (Concrete Batch Plant).

b. Recommend approval of a Map Amendment, Amendment to a Special Use for a Planned Unit Development, and a PUD Preliminary Plan(Corporate Reserve Multi-Family Residential).

4. ADDITIONAL BUSINESS

5. ADJOURNMENT

AGENDA ITEM EXECUTIVE SUMMARY

Title:	Recommend Approval of a Special Use on a Portion of the Property Located at 2900 Dukane Drive for Manufacturing, Heavy (Concrete Batch Plant)
Presenter:	Matthew O'Rourke

Please check appropriate box:

	Government Operations		Government Services
X	Planning & Development– (7/16/12)		City Council
	Public Hearing		

Estimated Cost:	NA	Budgeted:	YES		NO	

If NO, please explain how item will be funded:

Executive Summary:

RA Seaton Contractor Services, LLC. has submitted an Application for a Special Use for Manufacturing, Heavy on a portion of the property located at 2900 Dukane Drive. The proposed use is for a temporary concrete batch plant. This plant will supply the necessary concrete to Martam Construction, Inc. for the IDOT improvements to Rt. 64. The details of the proposal are as follows:

- One temporary concrete batch plant erected at the southwest corner of the property that is owned by Dukane, Inc. (2900 Dukane Drive).
- The concrete batch plant will be completely removed and the site will be restored once the construction projects on Rt. 64 are completed. (Estimated completion date is November of 2013)
- Two curb cuts will be created to serve as a truck entrance and exit.
- All materials related to the manufacture of concrete will be stockpiled on the site.
- Operation of the facility will begin at 6am.
- The plant will be in operation approximately 12 days in 2012 and 12 days in 2013.

Plan Commission Recommendation

The Plan Commission held a public hearing on 6-19-12 to discuss the proposal.

The Plan Commission recommended approval of the proposal contingent upon resolution of all Staff comments and subject to the conditions drafted by Staff on 7-3-12. The vote was 4-AYE to 0-NAY.

Attachments: *(please list)*

Site Plan; received 5/31/2012; Applications and Attachments; received 5/31/2012; Model S Batch Plant Product Information; RexCon, LLC; Stormwater Prevention Pollution Control Plan; received 6/26/2012; Stormwater Prevention and Site Restoration Bullet Point Summary; received 6/26/2012; Flexstorm IPP Inlet Filters Cover Spec. Sheet; received 6/26/2012; Draft Road Maintenance Agreement; received 6/21/2012; Draft Dust Control Plan; received 6/21/2012.

Recommendation / Suggested Action *(briefly explain)***:**

Recommend approval of the Special Use for Manufacturing, Heavy (Concrete Batch Plant) contingent upon satisfaction of any outstanding Staff Comments and subject to the following conditions:

1. The Special Use shall terminate on December 31, 2013 and equipment shall be removed by December 31, 2013. Full restoration of the site shall be completed by April 30, 2014.
2. The Special Use shall be limited to fifteen (15) days of concrete batch plant operation in the calendar years 2012 and 2013 respectively.
3. Submittal of a detailed Final Stormwater Prevention Pollution Control Plan.
4. All traffic related to the Special Use shall be limited to Stone and Dukane Drives.
5. The applicant shall enter into a maintenance agreement for repair of Stone and Dukane Drives.
6. The applicant shall enter into an agreement with the City to monitor dust, soil erosion, and cleaning.
7. The Special Use shall only be utilized to supply the construction/reconstruction of Rt. 64 between 7th Avenue and Rt. 59.

For office use only:	*Agenda Item Number: 3a*

Community Development
Planning Division
Phone: (630) 377-4443
Fax: (630) 377-4062

ST. CHARLES
SINCE 1834

Staff Report

TO: Chairman
And Members of the Government Operations Committee

FROM: Matthew O'Rourke, AICP
Planner

RE: 2900 Dukane Drive, Special Use for Manufacturing, Heavy (Concrete Batch Plant)

DATE: July 3, 2012

APPLICATION INFORMATION:

Project Name: 2900 Dukane Drive (Concrete Batch Plant)

Applicant: RA Seaton Contractor Services, LLC.

Purpose: Use a portion of the property located at 2900 Dukane Drive for a temporary concrete batch plant.

General Information:

Site Information	
Location	2900 Dukane Drive, Southwest corner of the property.
Acres	34.2 (Property) 1.8 (Concrete Batch Plant)

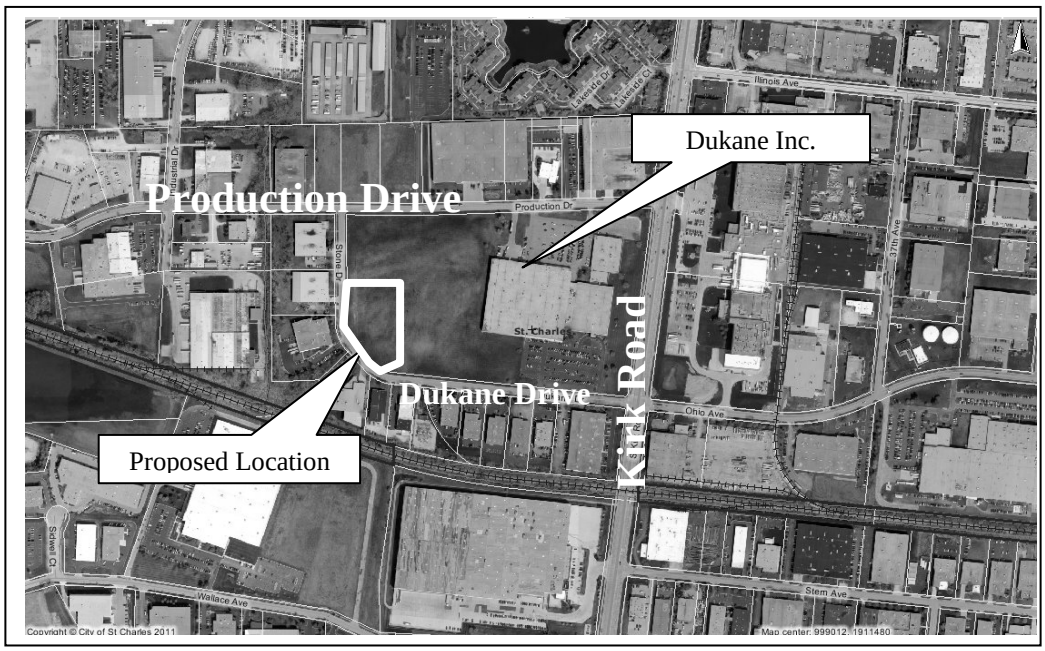
Applications	**1) Special Use for Manufacturing, Heavy (Concrete Batch Plant)**
Applicable Zoning Code Sections	Table 17.16-1 Office/Research, Manufacturing and Public Lands Permitted and Special Uses Table 17.16-2 Office/Research, Manufacturing and Public Lands Bulk Regulations 17.30 Definitions 17.24.110 Required Off-Street Parking for Manufacturing, Light & Heavy, and Warehouse Distribution Uses

Existing Conditions	
Land Use	Vacant/Dukane, Inc.
Zoning	M-2 – Limited Manufacturing

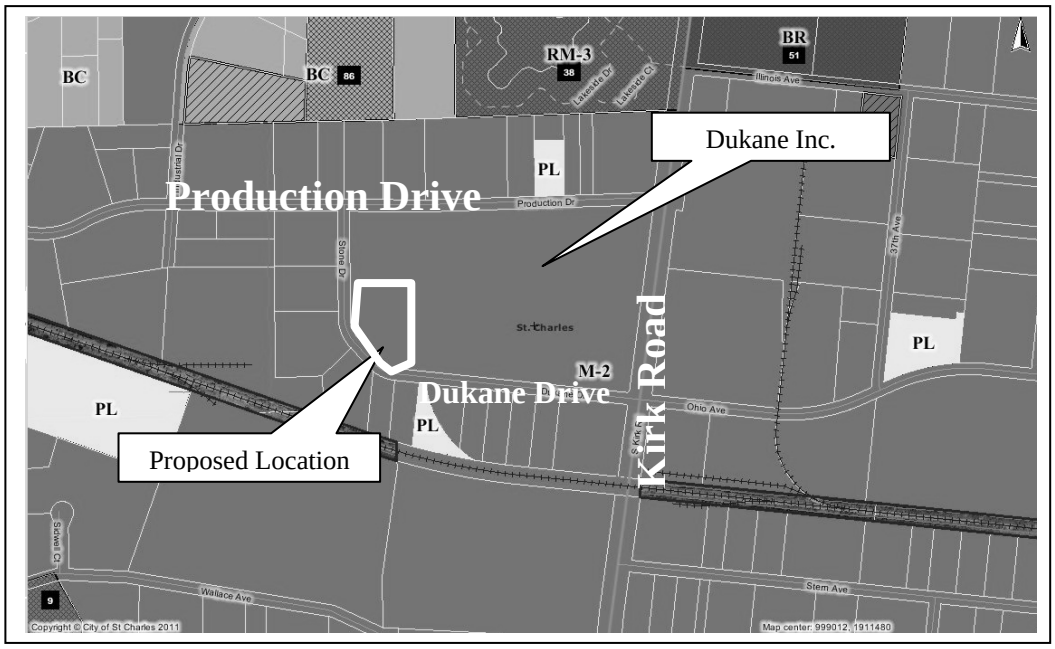
Zoning Summary		
North	M-2 – Limited Manufacturing	Manufacturing/Industrial Businesses
East	M-2 – Limited Manufacturing	Manufacturing/Industrial Businesses
South	M-2 – Limited Manufacturing	Manufacturing/Industrial Businesses
West	M-2 – Limited Manufacturing	Manufacturing/Industrial Businesses

Comprehensive Plan Designation
Manufacturing

Aerial Photo



Surrounding Zoning



II. OVERVIEW:

RA Seaton Contractor Services, LLC. has submitted an Application for a Special Use for Manufacturing, Heavy on a portion of the property located at 2900 Dukane Drive. The proposed Manufacturing, Heavy use is for a temporary concrete batch plant. This plant will supply the necessary concrete to Martam Construction, Inc. for the IDOT improvements to Rt. 64. Martam, Inc. is the company hired by IDOT to construct these improvements. The details of the proposal are as follows:

- One temporary concrete batch plant erected at the southwest corner of the property that is owned by Dukane, Inc. (2900 Dukane Drive).
- The concrete batch plant will be completely removed and the site will be restored once the construction projects on Rt. 64 are completed. (Estimated completion date is November of 2013)
- Two curb cuts will be created to serve as a truck entrance and exit.
- All materials related to the manufacture of concrete will be stockpiled on the site.
- Operation of the facility will begin at 6am.
- The plant will be in operation approximately 12 days in 2012 and 12 days in 2013.

III. ZONING ANALYSIS

Staff has reviewed the proposal to ensure compliance with the relevant bulk standards established in Title 17 the Zoning Ordinance. The following is a summary of that review:

1. PERMITTED AND SPECIAL USES

   The proposed concrete batch plant is considered a Manufacturing, Heavy use as defined by **Section 17.30.020 Manufacturing, Heavy:**

   "Activities or processes that may involve the storage of large volumes of highly flammable, toxic matter or explosive materials needed for the manufacturing process, and may involve outdoor operations. Typical heavy manufacturing uses include, but are not limited to: concrete batch plants, concrete, tile or brick manufacturing, automobile, truck and tire assembly, ammonia or chlorine manufacturing, metal casting or foundries, grain milling or processing, metal or metal ore production, refining, smelting or alloying, petroleum or petroleum product refining, boat, pool and spa manufacturing, slaughtering of animals, glass manufacturing, paper manufacturing, and wood or lumber processing. The assembly, fabrication or processing of goods and materials using processes that ordinarily have greater than average impacts on the environment, or that ordinarily have significant impacts on the use and enjoyment of adjacent property in terms of noise, smoke, fumes, odors, glare or health and safety hazards, are considered Heavy Manufacturing."

2. BULK STANDARDS

Staff has reviewed the proposal to ensure compliance with the relevant bulk standards established in **Chapter 17.16 Office/Research, Manufacturing, and Public Lands**.

Table 1 details Staff's review of the established bulk standards of **Table 17.16-2 Office/Research, Manufacturing, and Public Lands Office/Research, Manufacturing, and Public Lands Bulk Regulations.**

Table 1

Category	Zoning Ordinance Standard (M-2)	Existing Dukane Lot	Proposed Concrete Batch Plant Site Area
Lot Area	None	34.2 Acres	1.8 Acres
Lot Width	None	1,052.28'	260'
Building Setbacks:			
Front Setback	40 Feet	N/A	120 Feet (Approximate)
Interior Side	20 Feet	N/A	55 Feet (Approximate)
Exterior Side	10 Feet	N/A	60 feet
Rear	30 Feet	N/A	60 Feet (Approximate)
Building Coverage (FAR)	60 %	16.3%	N/A

Building Height

The maximum permitted building height in the M-2 Zoning District is 60 Feet. The total height of the facility is approximately 64'. However, per **Section 17.30.030 General Definitions**, building height is defined as follows:

"Building Height. The vertical distance from grade at the midpoint of the required front building line to a specified point on the building:

A. In the case of a flat roof, to the highest point of the wall or parapet; if the building design provides for enclosed mechanical equipment on the roof, the building height shall be measured to the highest point of the enclosing structure, if the enclosing structure comprises more than 20% of the lot coverage of the building.

B. In the case of a gable, hip, gambrel or mansard roof, to the top of the ridge of the highest area of thereof. Building elements extending above the main portion of the building such as chimneys, spires, steeples, towers, elevator penthouses, tanks and similar projections shall not be included in calculating building height, unless the area of a horizontal plane through the widest part of the building element comprises more than 20% of the lot coverage of the building."

Based on the language contained in subsection B and the Model S Batch Plant Product information submitted by the applicant, the height of the structure per the Zoning Ordinance definition is 58 feet tall. There are a couple of chimney/tower structures only that exceed the 60' maximum building height requirement.

Parking

Per **Section 17.24.110 Required Off-Street Parking for Manufacturing, Light & Heavy, and Warehouse Distribution Uses**, the parking requirement for a Manufacturing, Heavy facility is 1 space per every 1,000 square feet of gross floor area. Since there is no gross floor area, there is no way to calculate the off-street parking space requirement.

The applicant has stated that they will provide off-street parking spaces for the employees to use when the plant is in operation.

3. SPECIAL USE FINDINGS OF FACT SECTION 17.04.330.C.2 FINDINGS AND RECOMMENDATIONS

Staff's review of the proposed Special Use has revealed existing and proposed conditions that could impact the Special Use Findings of Fact for the proposed temporary concrete batch plant. The following is a summary of these items:

a. Street Network

The Public Works Department has stated that the condition of the roads surrounding 2900 Dukane Drive are in a failing state. There are concerns that the excessive weight of the trucks carrying loads of concrete will hasten the deterioration of these roads and ultimately affect the ability of surrounding property owners to utilize this road network.

Section 17.04.330.2 Finding of Fact and Recommendations - Finding of Fact b states the following, **"Sufficient Infrastructure: That adequate utilities, access roads, drainage and/or necessary facilities have been, or are being provided."**

Staff Comment:

Given the known condition of the surrounding road network, Staff is working with the applicant to create an action plan to address any deterioration issues caused by the operation of the concrete batch plant.

Response:

The applicant has submitted a revised draft maintenance agreement (attached to this report) requiring the applicant to repair any damage to the surrounding roads for the duration of the construction project. Staff is still in the process of reviewing these documents. This document will be finalized before City Council approval.

b. Environmental

Since there will be stockpiling of various materials used to make concrete on this site, there will need to be sufficient measures taken to control dust, material erosion, and run-off from these materials. The entrance to the proposed concrete batch plant is located where stormwater from the property enters the regional stormwater system. Stormwater leaving this site makes its way to the 7th Avenue Creek, which could potentially impact a number of downstream properties. Please consider the following:

Section 17.04.330.2 Finding of Fact and Recommendations, Special Use Finding of Fact c states the following**, "Effect of Nearby Property: That the Special Use will not be injurious to the use and enjoyment of the other property in the immediate vicinity of the purposes already permitted, nor substantially diminish or impair property values within the neighborhood."**

Staff Comments:

As part of this permit, there will need to be a stormwater pollution prevention plan that clearly identifies the methods the applicant will use to mitigate all concerns related to dust and erosion caused by the site disturbance and stockpiled materials.

The proposal will also be subject to the standards stated in **Section 17.22.050.D Dust and Air Pollution** as follows:

> *"Dust and other types of air pollution, borne by the wind from sources, such as storage areas, yards, roads, conveying equipment and the like, within lot boundaries, shall be kept to a minimum by appropriate landscaping, screening, sheltering, paving, fencing, wetting, collecting or other acceptable means. No persons shall cause, or allow, the emission of fugitive particulate matter across lot lines visible to an observer looking generally toward the zenith, beyond the property line. This requirement shall not apply when the wind speed is greater than twenty-five (25) miles per hour. Determination of wind speed for the purposes of this rule shall be by a one (1) hour average or hourly-recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site."*

Response:

The applicant has submitted a preliminary Stormwater Prevention Pollution Control Plan that Staff is in the process of reviewing. The preliminary plans and description are attached to this report for review. The applicant will need to show the following information on the final plans:

- A to scale site plan of the concrete batch plant and all equipment.
- The location off all stock piled materials and related silt fencing.
- Location of the new water service pipes, related appurtenances, and the sizes of these items.
- Location of the boundary silt fence.
- Location of the inlet filters.
- Location of the build check dam for washout.
- Location of the topsoil stockpile that has been stripped from the site. Details about the temporary seed mix should also be shown on the plans.
- Location of the silt fence around the topsoil stock pile.
- Location of the all Recycling Asphalt Product (RAP) on the site.
- Location of the proposed swale around the border of the site.
- Grading plan demonstrating a positive drainage flow (as stated in the bullet point summary.)

c. Special Use Timing

The applicant has stated that the concrete batch plant will only be located on this site for the duration of the IDOT Rt. 64 reconstruction projects, and once these projects are complete the concrete batch plant will be removed. The IDOT projects are scheduled to be complete by the end of November 2013.

IV. PLAN COMMISSION RECOMMENDATION

The Plan Commission held a Public Hearing on 6-19-12 to discuss the proposal.

The Plan Commission recommended approval of the proposal contingent upon resolution of all outstanding Staff Comments and subject to the conditions drafted by Staff on 7-3-12. The vote was 4-AYE to 0-NAY contingent upon resolution of all outstanding Staff comments.

V. REQUESTED ACTION

Staff recommends approval of the Special Use for Manufacturing, Heavy (Concrete Batch Plant) contingent upon satisfaction of any outstanding Staff Comments and subject to the following conditions:

1. The Special Use shall terminate on December 31, 2013. All construction equipment shall be removed from the site by December 31, 2013. Full restoration of the site shall be completed by April 30, 2014.
2. The Special Use shall be limited to fifteen (15) days of concrete batch plant operation in the calendar year 2012 and limited to fifteen (15) days of concrete batch plant operation in the calendar year 2013.
3. A detailed Final Stormwater Prevention Pollution Control Plan shall be submitted, reviewed and approved by the City before the site is occupied or disturbed in any way and before any permits are issued.
4. All traffic related to the Special Use be limited to Stone and Dukane Drives no traffic shall utilize Production Drive.
5. The applicant shall enter into a maintenance agreement with the City, agreeing to repair any damage to Stone and Dukane Drives caused by the operations of the Special Use including but not limited to:
    - Delivery of any materials in association with the Special Use.
    - Shipping of any product produced by the Special Use.
    - Clean-up and restoration of the site.
    - Any additional vehicular activity generated by the operation of the Special Use.
6. The applicant shall enter into an agreement with the City requiring the applicant to adequately monitor dust, soil erosion, and cleaning during the operation of the Special Use.
7. The Special Use shall only be utilized to supply the construction/reconstruction of Rt. 64 between 7th Avenue and Rt. 59.

VI. FINDINGS OF FACT FOR SPECIAL USE:

1. Public Convenience: The Special Use will serve the public convenience at the proposed location.

The proposed temporary Special Use will provide the necessary concrete materials for the Rt. 64 widening and reconstruction projects, and assist in the facilitation of the projects in a timely manner. This will help mitigate the impacts of the projects to the properties affected by the construction.

2. Sufficient Infrastructure: That adequate utilities, access roads, drainage and/or necessary facilities have been, or are being, provided.

Staff has identified that the roads in this area are failing. However, a maintenance agreement with the City will require the applicant to maintain, repair, or reconstruct any portion of City streets damaged by any activity related to the operation of the Special Use.

3. **Effect on Nearby Property: That the Special Use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish or impair property values within the neighborhood.**

   The location is in an industrial area zoned M-2 Limited Manufacturing. The Special Use shall only be permitted to operate for a total of 15 days in the 2012 calendar year and 15 days in the 2013 calendar year. The applicant is responsible for all site maintenance and mitigating any issues created by the stockpiling of materials, the construction of the plant, and the operation of the Special Use. Furthermore, the Special Use will be removed at the end of the 2013 calendar year.

4. **Effect on Development of Surrounding Property: That the establishment of the Special Use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.**

   The majority of the surrounding property is already developed, and the proposed use will be removed at the end of the 2013 calendar year.

5. **Effect on General Welfare: That the establishment, maintenance or operation of the Special Use will not be detrimental to or endanger the public health, safety, comfort or general welfare.**

   The applicant will be required to mitigate any dust, soil erosion, or road maintenance issues that result from the operation of this batch plant. The concrete batch plant is required to be removed at the end of the 2013 calendar year, and the applicant will be required to restore the site back to the condition it was in before the construction of the plant.

6. **Conformance with Codes: That the proposed Special Use conforms to all existing Federal, State and local legislation and regulation and meets or exceeds all applicable provisions of this Title, except as may be varied pursuant to Special Use for Planned Unit Development.**

   The proposed Special Use for Manufacturing, Heavy (concrete batch plant) will comply with all relevant standards of the Zoning Ordinance. No permits for the establishment of the concrete batch plant will be issued until all Staff comments have been addressed in a manner deemed acceptable by the City.

VI. ATTACHMENTS

- Stormwater Prevention Pollution Control Plan; received 6/26/2012.
- Stormwater Prevention and Site Restoration Bullet Point Summary; received 6/26/2012.
- Flexstorm IPP Inlet Filters Cover Spec. Sheet; received 6/26/2012.
- Draft Road Maintenance Agreement; received 6/21/2012.
- Draft Dust Control Plan; received 6/21/2012.

Cc: Russell Colby, Planning Division Manager
Rebecca Seaton, RA Seaton Contractor Services, LLC., Applicant
Britt Lienau, Elmhurst Stone

CITY OF ST. CHARLES

TWO EAST MAIN STREET
ST. CHARLES, ILLINOIS 60174-1984

COMMUNITY DEVELOPMENT/PLANNING DIVISION PHONE: (630) 377-4443 FAX: (630) 377-4062

SPECIAL USE APPLICATION

RECEIVED
Received Date
St. Charles, IL
MAY 30 2012
CDD
Planning Division

CITYVIEW
Project Name: 2900 DuKane Dr. (Concrete Batch Plant)
Project Number: 2012 -PR-007
Application Number: 2012 -AP-012

To request a Special Use for a property, or to request to amend an existing Special Use Ordinance for a property, complete this application and submit it with all required attachments to the Planning Division.

City staff will review submittals for completeness and for compliance with applicable requirements prior to establishing a public hearing date for an application.

The information you provide must be complete and accurate. If you have a question please call the Planning Division and we will be happy to assist you.

1. Property Information:	Parcel Number (s): 09-25-351-002	
	Street Address (or common location if no address is assigned): 2900 DuKane Drive St. Charles, IL 60174	
2. Applicant Information:	Name RA Seaton Contractor Services LLC	Phone 815-520-4812
	Address 1467 McKinley Ave Belvidere, IL 61008	Fax 815-547-7766
		Email raseatoncontractor@gmail.com
3. Record Owner Information:	Name DuKane Inc.	Phone 630-584-2300
	Address 2900 DuKane Drive St. Charles, IL 60174	Fax 630-584-5144
		Email tgoldman@dukane.com
4. Billing: *To whom should costs for this application be billed?*	Name RA Seaton Contractor Services LLC	Phone 815-520-4812
	Address 1467 McKinley Ave Belvidere, IL 61008	Fax 815-547-7766
		Email raseatoncontractor@gmail.com

Information Regarding Proposed Special Use:

Comprehensive Plan designation of the property: M 2

Is the property a designated Landmark or in a Historic District? NO

What is the property's current zoning? M2

What is the property currently used for? Manufacturing

What Special Use(s) are you applying for? Please select from the list of Special Uses in the Zoning Ordinance for the appropriate zoning district.

Heavy manufacturing

If the proposed Special Use is approved, what improvements or construction are planned?

Temporary concrete batch plant

For Special Use Amendments only:

What Special Use ordinance do you want to amend? Ordinance No. N/A

Why is the proposed change necessary?

N/A

What are the proposed amendments? (Attach proposed language if necessary)

N/A

Note for existing buildings:

If your project involves using an existing building, whether you plan to alter it or not, please contact the St. Charles Fire Department (630-377-4458) and the Building and Code Enforcement Division (630-377-4406) for information on building, life safety and other code requirements. Depending on the proposed use, size of structure and type of construction, these requirements can result in substantial costs.

Attachment Checklist

- ☒ **APPLICATION:** Completed application form signed by the applicant
- ☒ **APPLICATION FEE:** Application fee in accordance with Appendix B of the Zoning Ordinance.
- ☒ **REIMBURSEMENT OF FEES AGREEMENT:** An original, executed Reimbursement of Fees Agreement and deposit of funds in escrow with the City, as provided by Appendix B of the Zoning Ordinance.
- ☒ **PROOF OF OWNERSHIP and DISCLOSURE:**
  - a) A current title policy report; or
  - b) A deed and a current title search.

If the owner is not the applicant, an original letter of authorization from the owner permitting the applicant to act on his/her behalf is required. If the owner or applicant is a Trust, a disclosure of all beneficiaries; if the owner or applicant is a Partnership, a disclosure of all partners; if the owner or applicant is a Corporation, a disclosure of all owners with an interest of at least ten percent (10%).

☒ **LEGAL DESCRIPTION:** For entire subject property, on 8 1/2 x 11 inch paper

☒ **PLAT OF SURVEY:**

A current plat of survey for the Subject Realty showing all existing improvements on the property, prepared by a registered Illinois Professional Land Surveyor.

☒ **SOIL AND WATER CONSERVATION DISTRICT APPLICATION:**

Copy of completed Land Use Opinion application as required by state law, as submitted to The Kane-Dupage Soil and Water Conservation District. http://www.kanedupageswcd.org/

☒ **ENDANGERED SPECIES REPORT:**

Copy of Endangered Species Consultation Agency Action to be filed with the Illinois Department of Natural Resources. http://dnrecocat.state.il.us/ecopublic/

N/A ☐ **TRAFFIC STUDY:** If requested by the Director of Community Development.

☐ **PLANS:**

All required plans shall be drawn on sheets no larger than 24" x 36", unless the Director of Community Development permits a larger size when necessary to show a more comprehensive view of the project. All required plans shall show north arrow and scale, and shall be drawn at the same scale (except that a different scale may be used to show details or specific features). All plans shall include the name of the project, developer or owner of site, person or firm preparing the plan, and the date of plan preparation and all revisions.

Copies of Plans:

- Initial Submittal - Fifteen (15) full size copies, Three (3) 11" by 17", and a PDF electronic file on a CD-ROM.
- Revision Submittal for Plan Commission - Twenty-Two (22) full size copies, Three (3) 11" by 17" and a PDF electronic file on a CD-ROM.

☒ **SITE PLAN (Note: For a Special Use for PUD, submit PUD Preliminary Plan Application in lieu of Site Plan)**

A plan or plans showing the following information:

1. Accurate boundary lines with dimensions
2. Streets on and adjacent to the tract: Name and right-of-way width
3. Location, size, shape, height, and use of existing and proposed structures
4. Location and description of streets, sidewalks, and fences
5. Surrounding land uses
6. Date, north point, and scale
7. Ground elevation contour lines
8. Building/use setback lines
9. Location of any significant natural features
10. Location of any 100-year recurrence interval floodplain and floodway boundaries
11. Location and classification of wetland areas as delineated in the National Wetlands Inventory
12. Existing zoning classification of property
13. Existing and proposed land use
14. Area of property in square feet and acres
15. Proposed off-street parking and loading areas
16. Number of parking spaces provided, and number required by ordinance

17. Angle of parking spaces
18. Parking space dimensions and aisle widths
19. Driveway radii at the street curb line
20. Width of driveways at sidewalk and street curb line
21. Provision of handicapped parking spaces
22. Dimensions of handicapped parking spaces
23. Depressed ramps available to handicapped parking spaces
24. Location, dimensions and elevations of freestanding signs
25. Location and elevations of trash enclosures
26. Provision for required screening, if applicable
27. Exterior lighting plans showing:
    a. Location, height, intensity and fixture type of all proposed exterior lighting
    b. Photometric information pertaining to locations of proposed lighting fixtures

I (we) certify that this application and the documents submitted with it are true and correct to the best of my (our) knowledge and belief.

X _____ 05/29/2012 _____

Record Owner MICHAEL RITSCHDORFF Date TERRY GOLDMAN

_____ 5-26-2012

Applicant or Authorized Agent Date

FINDINGS OF FACT SHEET – SPECIAL USE

ST. CHARLES
SINCE 1834

The St. Charles Zoning Ordinance requires the Plan Commission to consider the factors listed below in making a recommendation to the City Council.

As the applicant, the "burden of proof" is on you to show how your proposed Special Use will comply with each of the applicable standards. Therefore, you need to "make your case" by explaining specifically how your project meets each of the following standards.

2900 Dukane Drive
Project Name or Address

5-24-12
Date

From the Charles Zoning Ordinance, Section 17.04.430.C.2:
No Special Use or amendment to Special Use shall be recommended by the Plan Commission unless it finds that the proposed Special Use or amendment to Special Use will conform with each of these standards. The Plan Commission shall submit its written findings together with its recommendations to the City Council after the conclusion of the Public Hearing, and also may recommend such conditions as it may deem necessary to ensure conformance with these standards.

On the basis of the evidence presented at the public hearing, the Plan Commission shall record its reasons for recommending approval or denial of the petition (findings of fact) in accordance with the following standards:

A. **Public Convenience: The Special Use will serve the public convenience at the proposed location.**

The proposed special use will help expedite the RTE 64 reconstruction project. The plant will reduce the truck traffic on RTE 64. The plant will reduce the number of paving days resulting in fewer lane closures.

B. **Sufficient Infrastructure: That adequate utilities, access roads, drainage and/or necessary facilities have been, or are being, provided.**

A CA-6 base will be installed for the plant and entryways.

C. **Effect on Nearby Property: That the Special Use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish or impair property values within the neighborhood.**

The plant is only temporary so it should not diminish values. The area will be restored to its same condition upon completion. Plant will only operate approximately 25 times in the 14 month period. Plant will not operate at night. Flagger will be present on days of operation. if needed

D. **Effect on Development of Surrounding Property: That the establishment of the Special Use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.**

The plant is temporary and therefore should have no impact on the development or improvement of the surrounding properties.

E. **Effect on General Welfare: That the establishment, maintenance or operation of the Special Use will not be detrimental to or endanger the public health, safety, comfort or general welfare.**

The proposed special use will actually be benefical to the public health, safety and comfort by accelerating the RTE 64 reconstruction, limiting lane closures and reducing truck traffic.

F. **Conformance with Codes: That the proposed Special Use conforms to all existing Federal, State and local legislation and regulation and meets or exceeds all applicable provisions of this Title, except as may be varied pursuant to a Special Use for Planned Unit Development.**

The proposed special use will be in conformance with all applicable standards established in the zoning ordinance.

EXHIBIT A

Legal Description

LOTS 7, 8, 9, 10, 11, 12, 13 and 14 (EXCEPT THAT PART OF SAID LOTS 10 AND 11 DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 10, PROCEED SOUTHERLY ON THE EAST LINE OF SAID LOTS 10 AND 11, 1052.28 FEET, TO THE SOUTHEAST CORNER OF SAID LOT 11; THEN WESTERLY ON THE SOUTH LINE OF SAID LOT 11, WHICH FORMS AN INTERIOR ANGLE OF 91 DEGREES 37 MINUTES 20 SECONDS WITH THE LAST DESCRIBED LINE, 20.00 FEET; THEN NORTHEASTERLY ON A LINE THAT FORMS AN INTERIOR ANGLE OF 44 DEGREES 11 MINUTES 20 SECONDS, 10.75 FEET TO A POINT ON A LINE 12.50 FEET WESTERLY OF AND PARALLEL WITH THE EAST LINE OF SAID LOTS 10 AND 11; THENCE NORTHERLY ON SAID PARALLEL LINE, WHICH FORMS AN EXTERIOR ANGLE OF 135 DEGREES 48 MINUTES 40 SECONDS WITH THE LAST DESCRIBED LINE, 1043.07 FEET TO A POINT ON THE NORTH LINE OF SAID LOT 10; THENCE EASTERLY ON SAID NORTH LINE, WHICH FORMS AN INTERIOR ANGLE OF 99 DEGREES 22 MINUTES 43 SECONDS, WITH THE LAST DESCRIBED LINE, 12.67 FEET TO THE POINT OF BEGINNING) OF UNIT NO. 2, THE "ST. CHARLES" ILLINOIS INDUSTRIAL DEVELOPMENT OF THE CENTRAL MANUFACTURING DISTRICT IN SECTIONS 25, 26, 35 AND 36, TOWNSHIP 40 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN KANE COUNTY, ILLINOIS.

Commonly known as:	2900 Dukane Drive, St. Charles, Illinois 60174
PIN	09-25-351-002

AUTHORIZATION

Let this letter serve as authorization permitting RA Seaton Contractor services LLC to act on behalf of DuKane Inc in obtaining a special use permit on its site.

By _____
MICHAEL RITSCHDORFF

It's CEO & PRESIDENT

MAINTENANCE AGREEMENT

Let this serve as an agreement between Martam Construction and the City of St Charles for the maintenance of Dukane and Stone Drives between Production and Kirk for the term of the proposed special use. Martam proposes to maintain and or repair any damages caused by excessive traffic attributed to their shipping from the proposed concrete batch plant. Maintenance will include but not be limited to failing pavement, damaged curbs, restoration of parkways and greenspaces. The city will approve all methods of repair. The Director of Public Works will make final repair decisions. Upon the directors decision Martam will perform the repair in no less than 72 hours. Upon completion of repair city staff shall inspect in for conformance. This maintenance agreement will apply to the construction seasons as follows. Present to November 30 2012 and April 1st 2013 to November 30 2013 or conclusion of project whichever is earlier. Martam will keep before and after records to help determine possible damages. This will include either photographs or video of the road. Martam would also like joint periodic inspections with the City of St Charles to maintain the road in a desired manner. In addition to this agreement Martam will put up a warranty bond for the road.

By_____ By_____

Martam Construction City of St. Charles

DUST CONTROL PLAN

A number of steps will be taken to address dust control. First of all the proposed plant is a central mix batch plant with a two compartment stationary dust collection system. A central mix plant batches the materials in its drum and discharges the wet concrete mixture into the truck. Most people are probably familiar with the more common dry batch plant. In a dry batch plant all materials are loaded dry into the mixer truck. Unlike a wet mix central batch plant, the dry batch has the potential to create dust. Second the entire site will be graded with a pervious RAP material. Unlike gravel base RAP material tends to be void of fine particles reducing dust. Third the contractor will provide a street sweeper on the days the plant is in use. Fourth a water truck will be on site to wet down any materials that may produce dust. Finally, prior to start up a list of phone numbers will be provided to all surrounding businesses so any of the questions will be addressed immediately.

Gentleman:

Enclosed is the method and procedure for what R. A. Seaton is proposing for the limited use permit for the concrete plant at 2900 Du Kane. You will find our storm water prevention plan, plant layout, erosion material certifications and restoration materials.

R. A. Seaton has been in the landscape and erosion control business for the State of Illinois for the past five years. Currently we are the Erosion Control Manager on two tollway projects that cover 22 miles of construction. I am confident that we will manage this site as required by the City. We will monitor the site and take corrective action as need from the weekly inspections. The erosion plan that we are submitting maybe altered to fit any requests that the City of St Charles may have.

The following page provides a bullet point presentation of the procedures that R. A. Seaton plans to implement for the erosion control, storm water management and site restoration for the proposed special use permit. These items are further illustrated on the drawings provided.

1) EROSION CONTROL/STORM WATER MANAGEMENT:
    - Install silt fence around perimeter of batch plant site
    - Install inlet filter on roadways to plant site
    - Weekly inspection of erosion control starts once silt fence is installed
    - 7 day cycle of inspection is established
    - After ½" rainfall inspection of erosion control will be performed
    - Inlet filter to be cleaned at 25% of capacity
    - Water plant area as needed when material is being imported and days of production
    - Sweep surrounding areas as needed
    - Build check dam for washout
    - Clean washout area as needed

2) PLANT AREA PREPARATION:
    - Strip topsoil from site and stock pile
    - Silt fence around topsoil stock pile
    - Temp seed topsoil
    - Place RAP on site
    - Establish positive drainage
    - Establish water source piping
    - Set up plant

3) OPERATION:
    - Haul in material for concrete
    - Production of concrete as needed on jobsite
    - Monitor streets and dust during production days and material import
    - Dust control and cleaning will be maintained during operation

4) SOIL RESTERATION:
    - Disconnect water source
    - Remove plant
    - Remove RAP from site
    - Spread topsoil over entire area
    - Restore area with IDOT class 2A and mulch
    - Once the grass establishes remove silt fence and inlet filters

INLET & PIPE PROTECTION, INC

24137 111TH ST , UNIT A
NAPERVILLE, ILLINOIS 60564
P/ 866.287.8655
F/ 630.355.3477
WWW.INLETFILTERS.COM

FLEXSTORM INLET FILTERS™

MATERIAL CERTIFICATION

DATE:

REF:

JOB:

PRODUCT: FLEXSTORM Inlet Filters

TOTAL QTY:

PRODUCER: INLET & PIPE PROTECTION, INC (IPP)
Naperville, IL
630 355-3288 ph
630 355-3477 fx
www.inletfilters.com

IPP CERTIFIES ABOVE PRODUCTS MEET IDOT SPECIFICATIONS AS OUTLINED IN ARTICLE 1081.15 OF IDOT's STANDARD SPECIFICATION GUIDE AND ISTHA SECTION 1114.10 AND SUPPLEMENTAL SPECIFICATION 280.20 FILTER FABRIC INLET PROTECTION. (SEE DETAILS ATTACHED)

James Ringenbach, Officer

FLEXSTORM INLET FILTERS™

MEMO

April 2008

From: **Jamie Ringenbach**
Inlet & Pipe Protection, Inc (IPP)

RE: **Inlet Filter Material Specifications**

Attached are the written specifications for IPP FLEXSTORM™ Inlet Filters. These specifications are also documented by IDOT in Sec 1081.15 for Inlet Filters and are covered by the tollway in ISTHA Sec 1114.10 and Supplemental Specification 280.20 under Filter Fabric Inlet Protection. All IPP Inlet Filters meet these specifications.

For IDOT and ISTHA jobs we supply the NonWoven geotextile sediment bags. ISTHA will be updating their spec in the near future to include more specific geotextile detail along with updated drawing views.

Thank you,

Jamie Ringenbach
Inlet & Pipe Protection, Inc

IPP FLEXSTORM™ INLET FILTERS

COVERED SPECS:

- **IDOT Specifications (Article 1081.15 of Standard Specifications Guide)**
- **ISTHA (Section 1114.10 / Supplemental Specification 280.20 under Filter Fabric Inlet Protection)**

An Inlet Filter shall consist of a steel frame with a two piece geotextile fabric bag attached with a stainless steel band and locking cap that is suspended from the frame. A clean, used bag and a used steel frame in good condition meeting the approval of the Engineer may be substituted for new materials. Materials for the inlet filter assembly shall conform to the following requirements:

Frame Construction. Steel shall conform to IDOT Article 1006.04; A36 structural steel (galvanized or zinc coated steel components)

Frames designed to fit under a grate shall include an overflow feature. The overflow feature shall be designed to allow full flow of water into the structure when the filter bag is full. The dimensions of the frame shall allow the drainage structure grate to fit into the inlet filter assembly frame opening. The assembly frame shall rest on the inside lip of the drainage structure frame for the full variety of existing and proposed drainage structure frames that are present on this contract. The inlet filter assembly frame shall not cause the drainage structure grate to extend higher than 6 mm (1/4 in.) above the drainage structure frame.

Geotextile Fabric Bag. The sediment bag shall be constructed of an inner filter bag and an outer reinforcement bag.

a. Inner Filter Bag material is Nonwoven THRACE–LINQ 130EX. The inner filter bag is constructed of a polypropylene geotextile fabric with a minimum silt and debris capacity of 0.06 cu m (2.0 cu ft). The geotextile filter material conforms to the following requirements:

Inner Filter Bag		
Material Property	Test Method	Minimum Avg. Roll Value
Grab Tensile Strength	ASTM D 4632	45 kg (100 lb)
Grab Tensile Elongation	ASTM D 4632	50%
Puncture Strength	ASTM D 4833	29 kg (65 lb)
Trapezoidal Tear	ASTM D 4533	20 kg (45 lb)
UV Resistance	ASTM D 4355	70% at 500 hours
Actual Open Size	ASTM D 1420	212 μm (No. 70 sieve US)
Permittivity	ASTM D 4491	2.0/sec
Water Flow Rate	ASTM D 4491	5900 Lpm/sq m (145 gpm/sq ft)
Mullen Burst	ASTM D 3786	1448 kPa (210 psi)

b. Outer Reinforcement Bag. The outer reinforcement bag shall be constructed of polyester mesh material that conforms to the following requirements:

Outer Reinforcement Bag		
Material Property	Test Method	Value
Content	ASTM D 629	Polyester
Weight	ASTM D 3776	155 g/sq m (4.55 oz/sq yd) ±15%
Whales (holes)	ASTM D 3887	7.5 ± 2 holes/25 mm (1 in.)
Chorses (holes)	ASTM D 3887	15.5 ± 2holes/25 mm (1 in.)
Instronball Burst	ASTM D 3887	830 kPa (120 psi) min.
Thickness	ASTM D 1777	1.0 ± 0.1 mm (0.040 ± 0.005 in.)

*** THRACE-LINQ 130EX is the Inner Filter Bag Material used in all NonWoven IPP Inlet Filters.

Thrace-LINQ™
MEMBER THRACE GROUP

Product Data Sheet

130EX

A nonwoven geotextile fabric supplied by Thrace-LINQ, Inc., is manufactured from Polypropylene staple fiber. The fibers are randomly oriented and form a cohesive / stabilized needle punched fabric for use in many applications, such as separation, drainage, filtration, etc. This fabric has been UV stabilized and is resistant to commonly encountered chemicals, mildew and insects found in soil. .

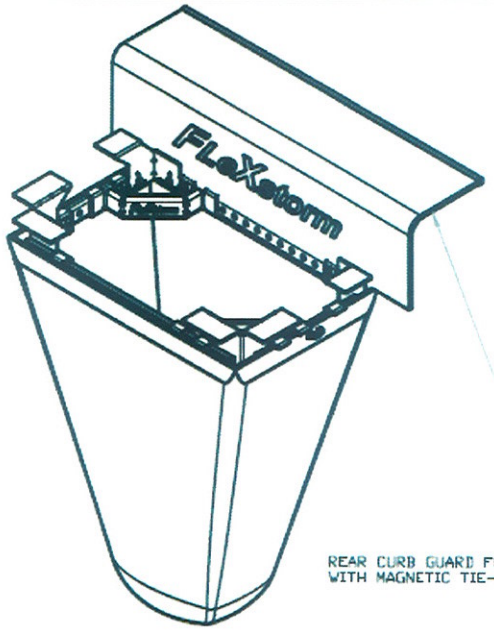
PROPERTY	*TEST PROCEDURE*	*METRIC*		*ENGLISH*	
		MARV		MARV	
Grab Tensile Strength	ASTM D-4632	467	N	105	lbs
Grab Elongation	ASTM D-4632	50	%	50	%
Trapezoid Tear	ASTM D-4533	200	N	45	lbs
Puncture	ASTM D-4833	289	N	65	lbs
Puncture (CBR)	ASTM D-6241	1335	N	300	lbs
Mullen Burst	ASTM D-3786	1448	kPa	210	psi
Permittivity	ASTM D-4491	2.0	sec^{-1}	2.0	sec^{-1}
A.O.S.	ASTM D-4751	0.212	mm	70	U.S. Sieve
UV Stability (500 hrs)	ASTM D-4355	70	%	70	%
Water Flow Rate	ASTM D-4491	5908	lpm/m^2	145	gpm/ft^2

PACKAGING	*TEST PROCEDURE*	*METRIC*		*ENGLISH*	
		Typical		Typical	
Weight	ASTM D-5261	136	g/m^2	4.0	oz/yd^2
Thickness	ASTM D-5199	1.397	mm	55	mils
Roll sizes		3.81 x 109.7 4.57 x 91.4	m m	12.5 x 360 15 x 300	ft ft
Roll Area		418 418	m^2 m^2	500 500	yd^2 yd^2

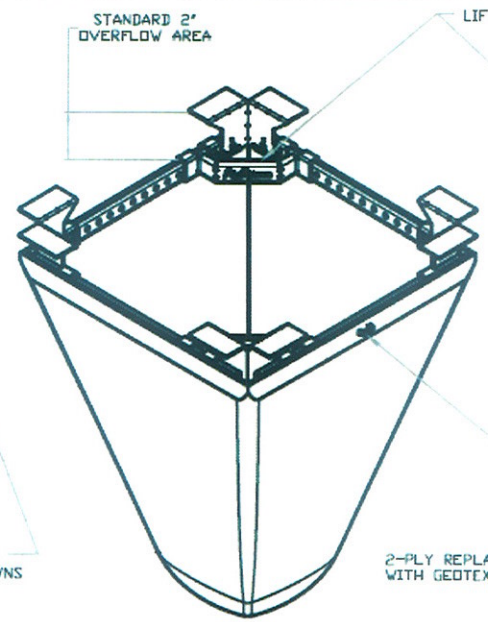
Thrace-LINQ, Inc 2550 West Fifth North St. Summerville, SC 29483
1-800-445-4675

11/5/2008

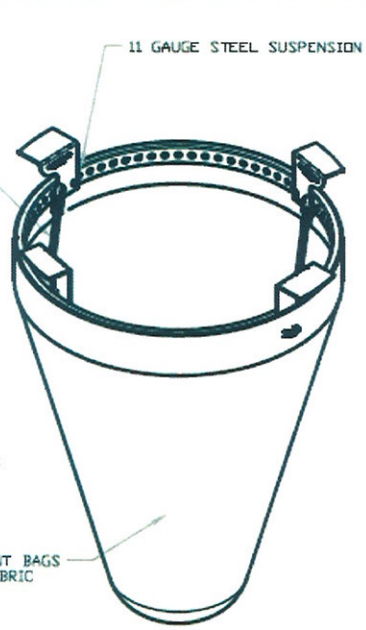
IPP FLEXSTORM™ SUBMITTAL DRAWING:



TYPICAL CURB BOX
INLET FILTER

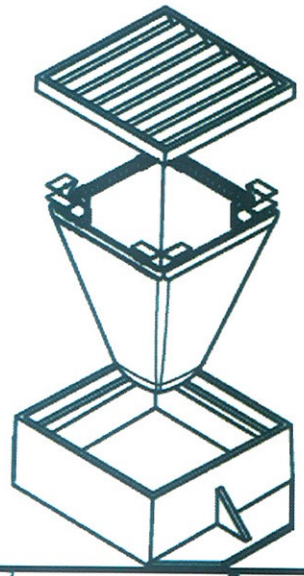


TYPICAL FLAT/RECTANGULAR/ROLLED CURB
INLET FILTER

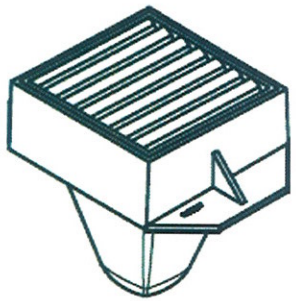


TYPICAL ROUND
INLET FILTER

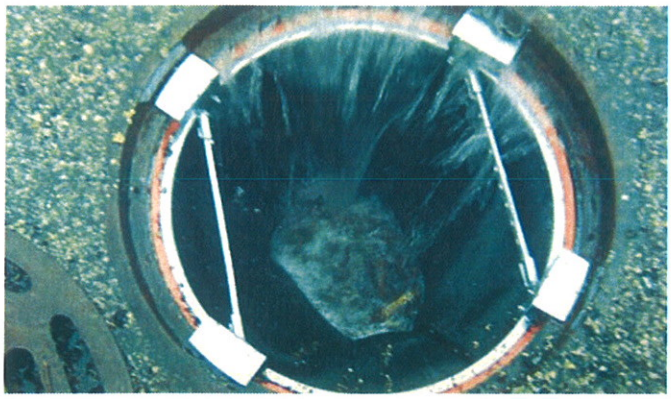
IPP *FLe* Xstorm Inlet Filter Specifications			
Material Property	*Test Method*	*Value (min ave)*	
> Inner Filter Bag Specs (2 ft³ min vol)		Non-Woven	Woven Mono
Grab Tensile	ASTM D 4632	100 lbs	200 lbs
Puncture Strength	ASTM D 4833	65 lbs	90 lbs
Trapezoidal Tear	ASTM D 4533	45 lbs	75 lbs
UV Resistance	ASTM D 4355	70% at 500 hrs	90%
App Open Size (AOS)	ASTM D 4751	70 sieve (.212 mm)	40 sieve (.425 mm)
Permittivity	ASTM D 4491	2.0 /sec	2.1/sec
Water Flow Rate	ASTM D 4491	145 gpm/sqft	145 gpm/sqft
> Polyester Outer Reinforcement Bag Specifications			
Weight	ASTM D 3776	4.55 oz/sqyd +/- 15%	
Thickness	ASTM D 1777	.040 +/- .005	
> Frame Construction			
A36 Structural Steel, 11 Guage; Zinc Plated	ASTM A 576	*Tensile Strength > 58,000 psi; Yield Strength > 36,000 psi*	



INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE



DRAWN: ANDRIANO	ALL PRODUCTS MANUFACTURED BY
CHECKED	INLET & PIPE PROTECTION, INC
QA	(866) 287-8655 PH
MFG	INFO@INLETFILTERS.COM
APPROVED	WWW.INLETFILTERS.COM
SIZE: C	DWG NO: IPP_FLEXSTORM_SPECS
SCALE	SHEET 1 OF 1



New: Flexstorm Product Configurator

About Flexstorm Inlet Filters

State DOTs and Municipalities across the country now have a universal structural BMP to address the issue of storm sewer inlet protection.The FLEXSTORM system is inexpensive, configurable and adjustable and offers more versatility to fit the wide array of drainage structures throughout the United States while offering various levels of filtration. FLEXSTORM Inlet Filters are the preferred choice for inlet protection and storm water runoff control.
Learn more about Flexstorm >
Flexstorm partners with ADS >

Flexstorm Features

- Configurable
  Steel frames configured to fit ANY storm drainage structure
- Adjustable
  Rectangular frames are adjustable in 1/2" increments up to 5" per side
- Reusable
  Replaceable geotextile sediment bags designed for construction or post construction applications
- Affordable
  Low per-unit cost; installs in seconds;

Flexstorm Product Configurator

In 3 simple steps, you'll have your Flexstorm filter configured so you can:

- Place an order
- Specify the filter for a project
- Request pricing and other information

Configure my filter now

Already know your part number?

- Request pricing and availability

Flexstorm Applications

- DOT/Road Construction
- Commercial/Parking Lots
- Residential Developments
- Industrial/Maintenance

easily maintained with Universal Removal Tool (no machinery required)

- Effective
  Works below grade; overflow feature allows streets to drain with full bag; prevents ponding

- Submit order information

loading

- Home
- Product Configurator
- Find a Sales Rep
- Resources
- Contact

INLET FILTERS

About Flexstorm

About Inlet & Pipe Protection, Inc.

Our team is comprised of veterans from the sewer & water industry along with experts in manufacturing, metal fabrication, and engineering. Our experience has enabled us to develop the most cost effective and robust Inlet Protection available. And our understanding of core municipal and construction requirements has positioned us to offer value added services worth the investment.

Inlet & Pipe Protection, Inc (IPP) has been producing the IDOT approved Inlet Filter since 2003. The IPP Inlet Filter is comprised of a rigid steel frame supporting a suspended sediment bag, which filters the storm water runoff below grade through a geotextile fabric with a typical flow rate of 145 gpm. Many municipalities throughout the Midwest have recognized this design as an acceptable structural BMP for inlet protection and have made it a standard for Erosion and Sediment Control plans. Inlet Filters are preferred by most engineers because of their durability, sediment bag capacity, ease of installation/maintenance, and important overflow benefits, which prevent hazardous ponding, road icing, and jobsite erosion.

About IPP FLeXstorm Inlet Filters

IPP has continually improved the Inlet Filter design platform and made a substantial investment in proprietary tooling of the FLeXstorm system. We have created the first configurable, adjustable Inlet Filter suspension system. This configurable system will replace the welded framework on the current IPP Inlet Filters and offer more versatility to fit the wide array of drainage structures throughout the Midwest and the United States.

The FLeXstorm Inlet Filter System will allow users to make adjustments as needed in the field. Once a job is complete, the re-usable filter frame system can be carried to the next jobsite equipped with a new sediment bag using only a screwdriver. Users may also break down the components and re-assemble into a completely different model by ordering new or modifying the existing channel lengths. All structural steel components are corrosion resistant

(zinc plated) and stamped with the FLeXstorm part numbers and hole locations. Our goal is to make FLeXstorm Inlet Filters a universally accepted design standard for inlet protection; capable of fitting any drainage structure throughout the United States while providing the maximum inlet protection against construction site runoff. The FLeXstorm Inlet Filter System also offers sediment bags with clog resistant Woven Monofilatment geotextiles for high silt jobsites, and oil absorption and hydrocarbon removal booms for parking lots and loading ramps.

loading

FLEXSTORM™ Inlet Filter Specifications and Work Instructions

Product: **FLEXSTORM and FLEXSTORM PC/PC+ Inlet Filters**

Manufacturer: **Inlet & Pipe Protection, Inc (IPP)** www.inletfilters.com

Distributor: **Advanced Drainage Systems (ADS)** www.ads-pipe.com

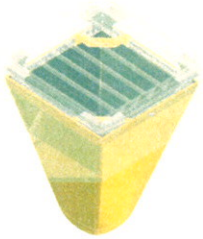
---

1.0 Description of Work:

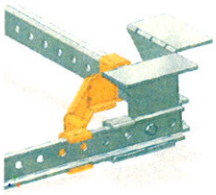
1.1 The work covered shall consist of supplying, installing, and maintaining/cleaning of the FLEXSTORM Inlet Filter assembly. The purpose of the FLEXSTORM Inlet Filter system is to collect silt and sediment from surface storm water runoff at drainage locations shown on the plans or as directed by the Engineer. Post Construction offerings (FLEXSTORM PC / PC+) are capable of removing small particles, hydrocarbons, and other contaminants from drainage "hot spots".

2.0 Material:

2.1 The FLEXSTORM Inlet Filter system is comprised of a corrosion resistant steel frame and a replaceable geotextile sediment bag attached to the frame with a stainless steel locking band. The sediment bag hangs suspended from the rigid frame at a distance below the grate that shall allow full water flow into the drainage structure if the bag is completely filled with sediment.

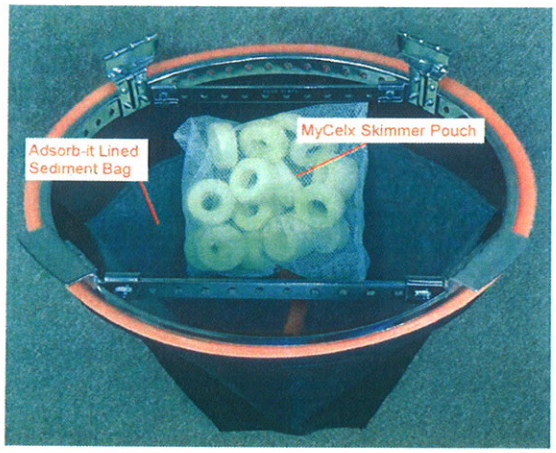


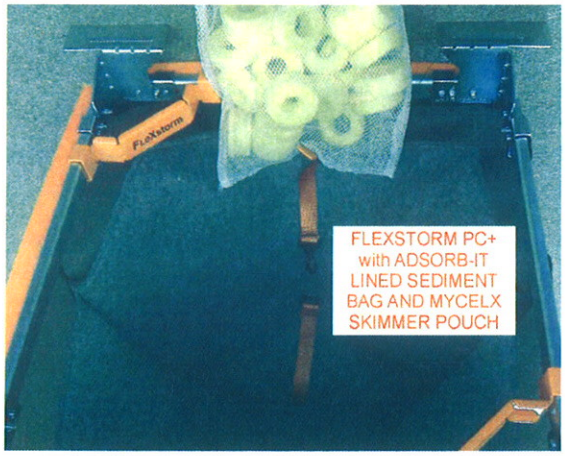

2.2 The FLEXSTORM Inlet Filter frame includes lifting handles in addition to the standard overflow feature. A FLEXSTORM Removal Tool engages the lifting bars or handles to allow manual removal of the assembly without machine assistance. The frame suspension system is adjustable in ½" increments up to 5" per side on rectangular designs should the casting or drainage structure have imperfections.


2.3 Standard FLEXSTORM Sediment Bag: The standard Woven Polypropylene Sediment Bags have a typical flow rate of 200 gpm per sqft. Litter / Leaf Bags are offered to collect larger debris at very high flow rates.

2.4 Post Construction FLEXSTORM PC and PC+ Sediment Bags: The Post Construction **"PC"** is the standard FLEXSTORM Woven Polypropylene sediment bag lined with Adsorb-it filter fabric, which is made from recycled polyester fibers. The **"PC+"** includes a replaceable MyCelx skimmer pouch strapped to the bottom of the bag for advanced hydrocarbon removal.





3.0 Sediment Bag Material Specifications (taken from manufacturers average roll value):

Material Property	Woven Polypropylene (Std Flexstorm bag)	Adsorb-it XTEX Liner (PC bag)	Leaf / Litter Polyester Mesh Bag (5 oz)
Flow Rate (gpm/sqft)	200	125	High
AOS (sieve)	20	130	5 mm x 6 mm hole size
Puncture Strength (lbs)	135	72	150

4.0 Tested Filtration Efficiency and Removal Rates: TSS and TPH testing performed under large scale, real world conditions at accredited third party erosion and sediment control testing laboratory. (See Full Test Reports at www.inletfilters.com or www.ads-pipe.com)

Inside View of Hopper Agitator

Hopper With Outlet Pipe Leading To Area Inlet

Area Inlet Simulated Showing Influent Discharge From Pipe

4.1 FLEXSTORM Standard Test Results: All testing performed in general accordance with the ASTM D 7351, *Standard Test Method For Determination of Sediment Retention Device Effectiveness in Sheet Flow Application,* with flow diverted into an area inlet. Test Soil used as sediment had the following characteristics with a nominal 7% sediment to water concentration mix. This is representative of a heavy sediment load running off of a construction site.

Soil Characteristics	Test Method	Value		Filtration Efficiency of Standard FLEXSTORM Bag
% Gravel	ASTM D 422	2		82%
% Sand		60		
% Silt		24		
% Clay		14		
Liquid Limit, %	ASTM D 4318	34		
Plasticity Index, %		9		
Soil Classification	USDA	Sandy Loam		
Soil Classification	USCS	Silty Sand (SM)		

4.2 FLEXSTORM PC and PC+ Test Results: TSS measured on effluent samples in accordance with SM 2540D and TPH in accordance with EPA 1664A.

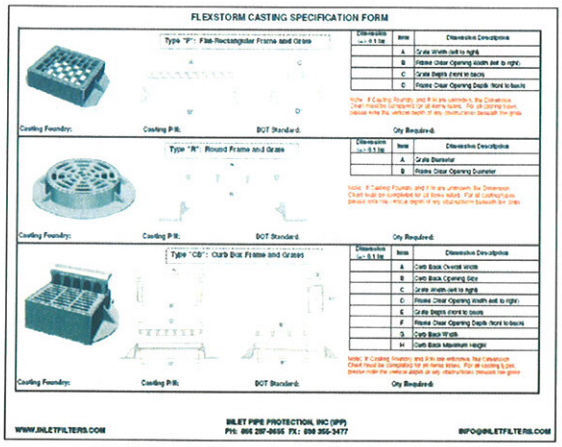
Product Tested	110 micron Sediment Load	Ave Flow Rate GPM	% TSS Removal	Soil Retention Efficiency
FLEXSTORM PC Sediment Bag	1750 mg/L using OK-110 Silica Sand and Clean Water	23	**99.28%**	98.96%
		48	**99.32%**	99.25%
		70	**98.89%**	98.80%

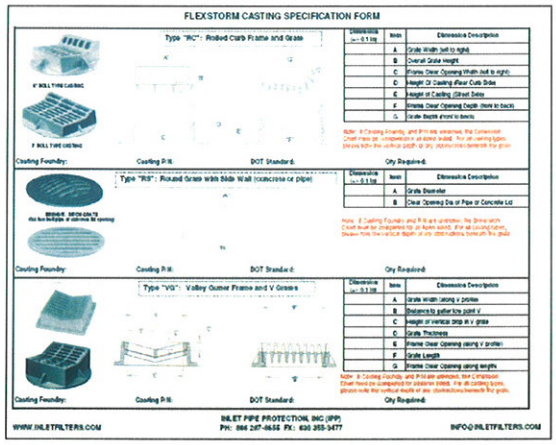
Product Tested	Street Sweep Sediment Load	Particle Size of Sediment Load	% TSS Removal	Soil Retention Efficiency
FLEXSTORM PC Sediment Bag	2.5% = 100 lbs Sed / 4000 lbs water	.001 mm – 10.0 mm (median 200 micron)	**99.68%**	95.61%

Product Tested	Hydrocarbon Load	Ave Flow Rate GPM	% TPH Removal	Oil Retention Efficiency
FLEXSTORM PC+	243 mg/L using 750 mL (1.45 lb) used motor oil + lube oil and clean water	19	**99.04%**	97.22%
FLEXSTORM PC		20	**97.67%**	91.61%
FLEXSTORM PC+		92	**96.88%**	99.11%

5.0 Identification of Drainage Structures:

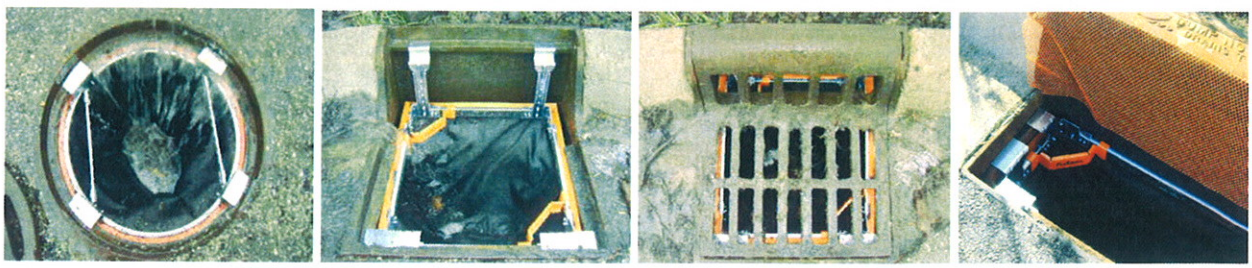
5.1 The Installer (Contactor) shall inspect the plans and/or worksite to determine the quantity of each drainage structure casting type. The foundry casting number or the exact grate size and clear opening size will provide the information necessary to identify the required FLEXSTORM Inlet Filter part number. Inlet Filters are supplied to the field pre-configured to fit the specified drainage structure. (See Product Selection Guides and Casting ID Forms at www.inletfilters.com or www.ads-pipe.com)





6.0 Installation Into Standard Grated Drainage Structures:

6.1 Remove the grate from the casting or concrete drainage structure. Clean the ledge (lip) of the casting frame or drainage structure to ensure it is free of stone and dirt. Drop in the FLEXSTORM Inlet Filter through the clear opening and be sure the suspension hangers rest firmly on the inside ledge (lip) of the casting. Replace the grate and confirm it is elevated no more than 1/8", which is the thickness of the steel hangers. For Curb Box Inlet Filters: Insert FLEXSTORM Inlet Filter as described above, pull the rear curb guard flap up and over the open curb box until tight, align magnets to ensure firm attachment to the top portion of the curb box casting. If the curb back opening is not magnetic, slide a typical rock sack or 2 x 4 through the 2-ply rear curb box flap to create a dam which will direct runoff into the sediment bag.



7.0 **Maintenance Guidelines:** The frequency of maintenance will vary depending on the application (course construction, post construction, or industrial use), the area of installation (relative to grade and runoff exposure), and the time of year relative to the geographic location (infrequent rain, year round rain, rain and snow conditions). The FLEXSTORM Operation & Maintenance Plan (as shown below) or other maintenance log should be kept on file.

7.1 Frequency of Inspections: Construction site inspection should occur following each ½" or more rain event. Post Construction inspections should occur three times per year (every four months) in areas with mild year round rainfall and four times per year (every three months Feb-Nov) in areas with summer rains before and after the winter snowfall season. Industrial application site inspections (loading ramps, wash racks, maintenance facilities) should occur on a regularly scheduled basis no less than three times per year.

7.2 General Maintenance for standard sediment bags: Upon inspection, the FLEXSTORM Inlet Filter should be emptied if the sediment bag is more than half filled with sediment and debris, or as directed by the Engineer. Remove the grate, engage the lifting bars or handles with the FLEXSTORM Removal Tool, and lift the FLEXSTORM Inlet Filter from the drainage structure. Machine assistance is not required. Dispose of the sediment or debris as directed by the Engineer. As an alternative, an industrial vacuum may be used to collect the accumulated sediment if available. Remove any caked on silt from the sediment bag and reverse flush the bag for optimal filtration. Replace the bag if the geotextile is torn or punctured to ½" diameter or greater on the lower half of the bag. If properly maintained, the Woven sediment bag should last a minimum of 4 years in the field.

7.3 Inspection and Handling of the FLEXSTORM PC and PC+ post construction sediment bag: The PC+ sediment bags will collect oil until saturated. Both the Adsorb-it filter liner and the MyCelx skimmer pouch will retain oil. The volume of oils retained will depend on sediment bag size. Unlike other passive oil sorbent products, Adsorb-it filter fabric has the ability to remove hydrocarbons at high flow rates while retaining 10- 20 times its weight in oil (weight of fabric is 12.8 oz / sq yd). The average 2' x 2' PC Bag contains approx .8 sq yds, or 10 oz of fabric. At 50% saturation, the average Adsorb-it lined PC filter will retain approximately 75 oz (4.2 lbs) of oil. Once the bag has become saturated with oils, it can be centrifuged or passed through a wringer to recover the oils, and the fabric reused with 85% to 90% efficacy. If it is determined, per Maintenance Contracts or Engineering Instructions, that the saturated PC sediment bags will be completely replaced, it is the responsibility of the service technician to place the filter medium and associated debris in an approved container and dispose of in accordance with EPA regulations. Spent Adsorb-it can be recycled for its fuel value through waste to energy incineration with a higher BTU per pound value than coal. The MyCelx skimmer pouch is made of all natural biodegradable materials and should be disposed of in the same fashion as the Adsorb-it filter membrane (likened to an oily rag). It too, is an excellent fuel source and can be burned for energy. The skimmers start yellow in color and will gradually turn brown as they become saturated, indicating time for replacement. Each MyCelx skimmer pouch will absorb approximately 89 oz (5 lbs) of oil before requiring replacement. To remove the pouch simply unclip it from the swivel strap sewn to the bottom of the bag.

7.4 Sediment Bag Replacement: When replacing a Sediment Bag, remove the bag by loosening or cutting off the clamping band. Take the new sediment bag, which is equipped with a stainless steel worm drive clamping band, and use a screw driver to tighten the bag around the frame channel. Ensure the bag is secure and that there is no slack around the perimeter of the band. For Oil absorbent boom bags, simply replace the oil boom or pouch when saturated by sliding it through the mesh support sleeve.

7.5 Operation & Maintenance Plan. (Download at www.inletfilters.com or www.ads-pipe.com)

FLEXSTORM OPERATION & MAINTENANCE PLAN

Installation Instructions:

1. Remove the grate from the casting or concrete drainage structure.
2. Clean the ledge (lip) of the casting frame or drainage structure to ensure it is free of stone and dirt.
3. Drop in the FLEXSTORM Inlet Filter through the clear opening and be sure the suspension hangers rest firmly on the inside ledge (lip) of the casting.
4. Replace the grate and confirm it is elevated no more than 1/8", which is the thickness of the steel hangers.

Frequency of Inspections:

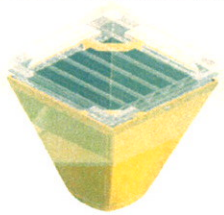
1. Construction site inspection should occur following each ½" or more rain event.
2. Post Construction inspections should occur three times per year (every four months) in areas with mild year round rainfall and four times per year (every three months Feb-Nov) in areas with summer rains before and after the winter snowfall season.
3. Industrial application site inspections (loading ramps, wash racks, maintenance facilities) should occur on a regularly scheduled basis no less than three times per year.

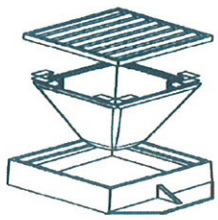
Maintenance Guidelines:

1. Empty the sediment bag if more than half filled with sediment and debris, or as directed by the Engineer.
2. Remove the grate, engage the lifting bars or handles with the FLEXSTORM Removal Tool. and lift from the drainage structure.
3. Dispose of the sediment or debris as directed by the Engineer or Maintenance Contract in accordance with EPA guidelines.
4. As an alternative, an industrial vacuum may be used to collect the accumulated sediment.
5. Remove any caked on silt from the sediment bag and reverse flush the bag with medium spray for optimal filtration.
6. Replace the bag if torn or punctured to ½" diameter or greater on the lower half of the bag.
7. Post Construction PC Bags maint: At 50% saturation, the average 2' x 2' Adsorb-it lined PC filter will retain approx 75 oz (4.2 lbs) of oil and should be serviced or replaced. It can be centrifuged or passed through a wringer to recover the oils, and the fabric reused with 85% to 90% efficacy. It may also be recycled for its fuel value through waste to energy incineration.
8. MyCelx Skimmer Pouches: The skimmers start yellow in color and will gradually turn brown as they become saturated, indicating time for replacement. Each MyCelx skimmer pouch will absorb approximately 89 oz (5 lbs) of oil before requiring replacement.
9. Dispose of all oil contaminated products in accordance with EPA guidelines.

Sediment Bag Replacement:

1. Remove the bag by loosening or cutting off the clamping band.
2. Take the new sediment bag, which is equipped with a stainless steel worm drive clamping band, and use a screw driver to tighten the bag around the frame channel.
3. Ensure the bag is secure and that there is no slack around the perimeter of the band.

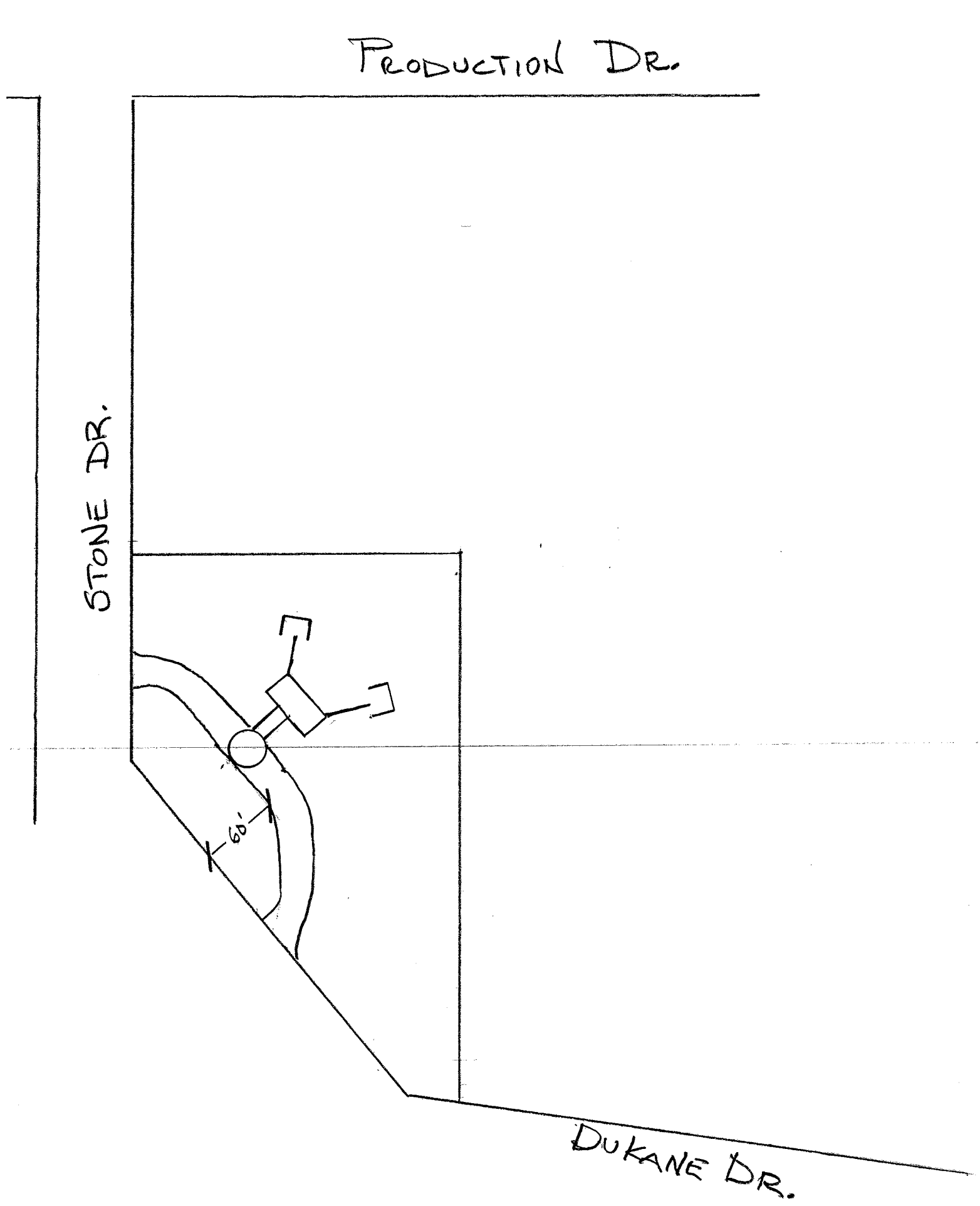




STRUCTURE ID#/LOCATION:

DATE	TASK PERFORMED	INSPECTOR

PRODUCTION DR.
PARKING & LOADING
EXISTING BUILDING
PARKING
S. KIRK RD
DUKANE DR
STATE DR.
260'
450'
90'
60'
To Main Existing Drive
To Main Existing Drive
N
SCALE
Approx 1" = 200'


PRODUCTION DR.
STONE DR.
60'
DUKANE DR.

2841 Whiting Road Burlington, WI 53105 Tel (262) 539-4050

Visit www.rexcon.com to see all RexCon products.

THE TRADITION CONTINUES

MODEL S BATCH PLANT

The Model S Portable Paving Batch Plant offers portability, volume production, and quality mixing. Modular designed sections are pin connected for fast installation on your jobsite. The Model S produces up to 35 loads per hour with a RexCon tilt mixer, and 55 loads per hour when also using the RexCon Horizontal Shrink Mixer.

The Model S Batch Plant can be easily converted for portable or permanent ready mix applications.

FEATURES

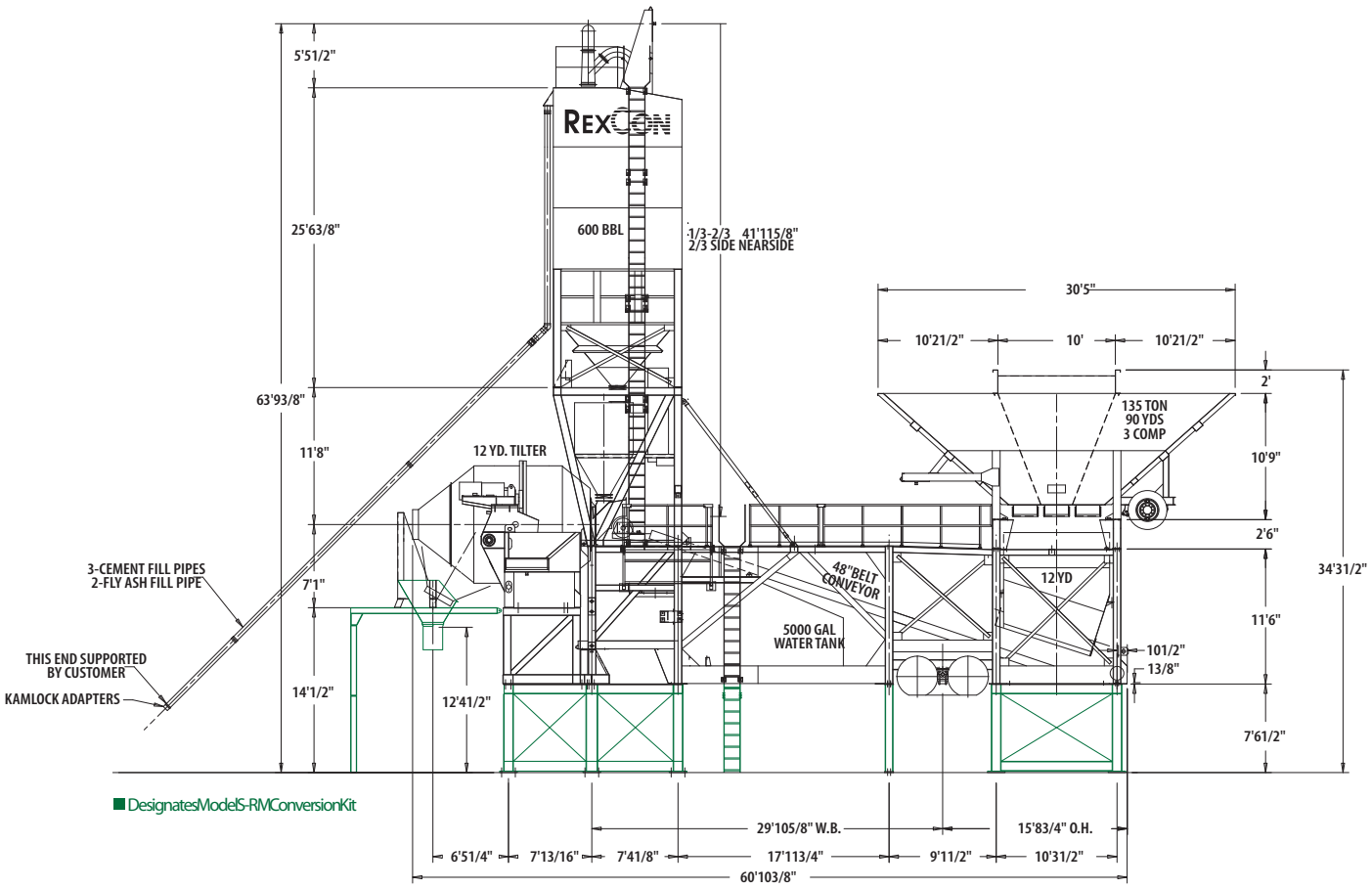
- 48 in. wide, high speed batch belt with deep troughing rollers moves more material faster.
- Aggregate batcher with adjustable baffles produces uniform blending of aggregates as it loads the batch belt.
- Water holding tank mounted above mixer provides gravity flow of pre-batched water upon batch controls demand.
- 135 Ton aggregate bin can be mounted in either direction so footprint of Model S and conveyors can adapt to space conditions.
- Horizontal shrink drum can be easily added to all Model S plants for increased production.
- All sections are pin connected, pre-wired and pre-plumbed for fast installation.

NEW *"direct drive"* horizontal shrink drum

Reversible aggregate bin

IMPROVED multiple level access

MODEL S BATCH PLANT



SPECIFICATIONS

- Tilt Mixer Trailer: 12 cu. yd. / 9 cu. m (CPMB) tilt mixer with poly lined drum, 30 HP hydraulic pac, emergency mixer tilting, and mixer stand.
- Plant Base Trailer: 12 cu. yd. / 9 cu. m (CPMB) aggregate batcher with 50,000 lb. load cells, 48" wide batch belt (500 FPM), 20 HP air compressor with 120 gal. tank, 3" Badger water meter, 5000 gal. water storage tank, 3 HP aeration blower.
- Cement Section Trailer: 2400 cu. ft. / 600 bbl. (CPMB) split compartment silo with double wall, high and low bin signals, mixer charging hood, five 5" cement fill pipes, batched water holding reservoir.
- Aggregate Bin Trailer: 135 Ton / 90 cu. yd. (CPMB) reversible bin, with 3 compartments and 3 high level bin signals.
- Electrical System: 460 Volt power panel with starters.
- RexCon RC3 computer batch controls.

For more information on the Model S, contact your RexCon sales support staff.

OPTIONS

- Gravity cement storage: 3000 cu. ft. / 750 bbls., single or split compartment.
- Auxiliary cement storage: 2200 cu. ft. / 550 bbl., 3000 cu. ft. / 750 bbl., or 4200 cu. ft. / 1050 bbl., single or split compartment.
- Extended length control and power cables.
- Factory installed control and power panel.
- Office trailer or container for computer batch controls and power panels.
- High Performance Mixing System with two 100 HP reducers and drives (in place of 60 HP) and high performance spiral blades increases production volume up to 45 loads per hour.
- Material handling conveyors with hopper, control, starter (in power panel) and wiring.
- AR Steel or polyurethane liners for aggregate bins & batcher.
- RA200 central dust collection.

Specifications are subject to change without notice.

REXCON
The Tradition Continues

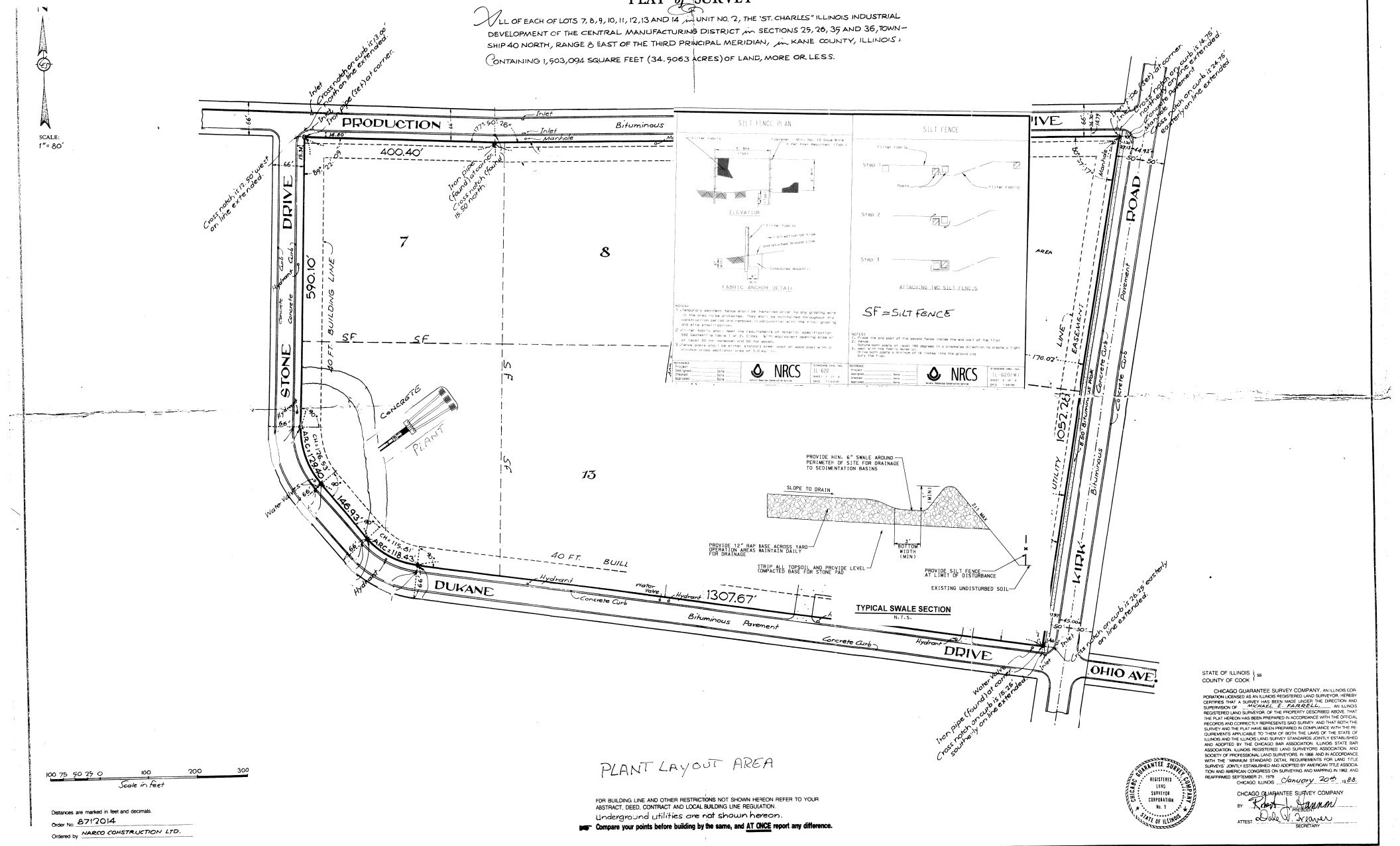
2841 Whiting Road Burlington, WI 53005
Tel **(262) 539-4050** Fax (262) 539-4487
www.rexcon.com

MADE IN THE USA

PLAT of SURVEY

ALL OF EACH OF LOTS 7, 8, 9, 10, 11, 12, 13 AND 14 IN UNIT NO. 2, THE "ST. CHARLES" ILLINOIS INDUSTRIAL DEVELOPMENT OF THE CENTRAL MANUFACTURING DISTRICT IN SECTIONS 25, 26, 35 AND 36, TOWNSHIP 40 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN KANE COUNTY, ILLINOIS;

CONTAINING 1,503,094 SQUARE FEET (34.5063 ACRES) OF LAND, MORE OR LESS.



PLANT LAYOUT AREA

100 75 50 25 0 100 200 300
Scale in feet

Distances are marked in feet and decimals.

Order No. 8712014

Ordered by NARCO CONSTRUCTION LTD.

FOR BUILDING LINE AND OTHER RESTRICTIONS NOT SHOWN HEREON REFER TO YOUR ABSTRACT, DEED, CONTRACT AND LOCAL BUILDING LINE REGULATION.

Underground utilities are not shown hereon.

Compare your points before building by the same, and AT ONCE report any difference.

STATE OF ILLINOIS } ss
COUNTY OF COOK }

CHICAGO GUARANTEE SURVEY COMPANY, AN ILLINOIS CORPORATION LICENSED AS AN ILLINOIS REGISTERED LAND SURVEYOR, HEREBY CERTIFIES THAT A SURVEY HAS BEEN MADE UNDER THE DIRECTION AND SUPERVISION OF MICHAEL E. FARRELL, AN ILLINOIS REGISTERED LAND SURVEYOR, OF THE PROPERTY DESCRIBED ABOVE, THAT THE PLAT HEREON HAS BEEN PREPARED IN ACCORDANCE WITH THE OFFICIAL RECORDS AND CORRECTLY REPRESENTS SAID SURVEY, AND THAT BOTH THE SURVEY AND THE PLAT HAVE BEEN PREPARED IN COMPLIANCE WITH THE REQUIREMENTS APPLICABLE TO THEM OF BOTH THE LAWS OF THE STATE OF ILLINOIS AND THE ILLINOIS LAND SURVEY STANDARDS JOINTLY ESTABLISHED AND ADOPTED BY THE CHICAGO BAR ASSOCIATION, ILLINOIS STATE BAR ASSOCIATION, ILLINOIS REGISTERED LAND SURVEYORS ASSOCIATION, AND SOCIETY OF PROFESSIONAL LAND SURVEYORS IN 1908 AND IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY AMERICAN TITLE ASSOCIATION AND AMERICAN CONGRESS ON SURVEYING AND MAPPING IN 1962, AND REAFFIRMED SEPTEMBER 21, 1979

CHICAGO, ILLINOIS January 20th, 1988.

CHICAGO GUARANTEE SURVEY COMPANY

BY Ronald J. Shannon PRESIDENT

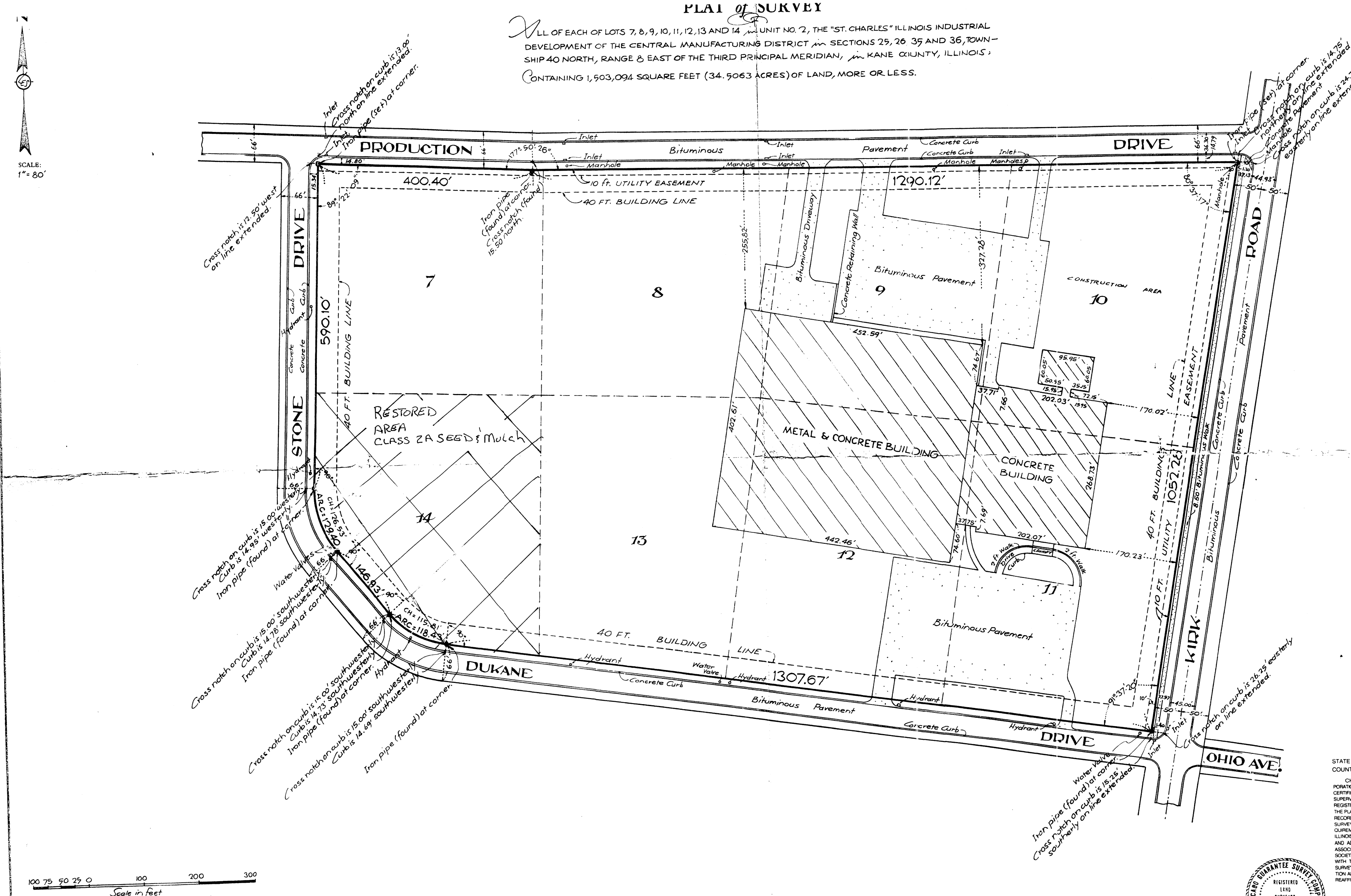
ATTEST Dale W. Jensen SECRETARY

CHICAGO GUARANTEE SURVEY COMPANY — REGISTERED LAND SURVEYOR CORPORATION No. 1 — STATE OF ILLINOIS

PLAT of SURVEY

ALL OF EACH OF LOTS 7, 8, 9, 10, 11, 12, 13 AND 14 in UNIT NO. 2, THE "ST. CHARLES" ILLINOIS INDUSTRIAL DEVELOPMENT OF THE CENTRAL MANUFACTURING DISTRICT in SECTIONS 25, 26 35 AND 36, TOWNSHIP 40 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, in KANE COUNTY, ILLINOIS;

CONTAINING 1,503,094 SQUARE FEET (34.5063 ACRES) OF LAND, MORE OR LESS.



Distances are marked in feet and decimals.

Order No. 8712014

Ordered by NARCO CONSTRUCTION LTD.

FOR BUILDING LINE AND OTHER RESTRICTIONS NOT SHOWN HEREON REFER TO YOUR ABSTRACT, DEED, CONTRACT AND LOCAL BUILDING LINE REGULATION.

Underground utilities are not shown hereon.

Compare your points before building by the same, and AT ONCE report any difference.

STATE OF ILLINOIS } SS
COUNTY OF COOK }

CHICAGO GUARANTEE SURVEY COMPANY, AN ILLINOIS CORPORATION LICENSED AS AN ILLINOIS REGISTERED LAND SURVEYOR, HEREBY CERTIFIES THAT A SURVEY HAS BEEN MADE UNDER THE DIRECTION AND SUPERVISION OF MICHAEL E. FARRELL, AN ILLINOIS REGISTERED LAND SURVEYOR, OF THE PROPERTY DESCRIBED ABOVE, THAT THE PLAT HEREON HAS BEEN PREPARED IN ACCORDANCE WITH THE OFFICIAL RECORDS AND CORRECTLY REPRESENTS SAID SURVEY, AND THAT BOTH THE SURVEY AND THE PLAT HAVE BEEN PREPARED IN COMPLIANCE WITH THE REQUIREMENTS APPLICABLE TO THEM OF BOTH THE LAWS OF THE STATE OF ILLINOIS AND THE ILLINOIS LAND SURVEY STANDARDS JOINTLY ESTABLISHED AND ADOPTED BY THE CHICAGO BAR ASSOCIATION, ILLINOIS STATE BAR ASSOCIATION, ILLINOIS REGISTERED LAND SURVEYORS ASSOCIATION, AND SOCIETY OF PROFESSIONAL LAND SURVEYORS, IN 1968, AND IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY AMERICAN TITLE ASSOCIATION AND AMERICAN CONGRESS ON SURVEYING AND MAPPING IN 1962, AND REAFFIRMED SEPTEMBER 21, 1979.

CHICAGO, ILLINOIS January 20th 1988.

CHCAGO GUARANTEE SURVEY COMPANY

BY: Robert J. Hanum PRESIDENT

ATTEST: Dale V. Treaver SECRETARY

CHICAGO GUARANTEE SURVEY COMPANY · REGISTERED LAND SURVEYOR CORPORATION No. 1 · STATE OF ILLINOIS

DUKANE

Dukane Corporation
2900 Dukane Drive
St. Charles, IL 60174
TEL: (630) 584-2300
FAX: (630) 584-5144
www.dukcorp.com

June 19, 2012

St. Charles Plan Commission
2 E. Main Street
St. Charles, IL 60174 60174-1984

Dear Plan Commission:

We are aware that a public hearing will be held tonight to review the "special use application for manufacturing" to erect a temporary concrete batch plant on the southwest corner of 2900 Dukane Drive, St. Charles, IL 60174. Due to previous commitments, neither I, nor the V.P. of Administration, Terry Goldman, are able to attend tonight's hearing.

The Economic Development Office of St. Charles recommended that we work with Elmhurst-Chicago Stone Company on this project. We enthusiastically support the City's and Elmhurst-Stone's intention to streamline the production and delivery of cement for this project. The location of the batch plant on this site will help to expedite cement delivery. I have been guaranteed that the land being used by this temporary batch manufacturing site will be returned to its original state.

We have personally met and explained the project with the majority of our neighbors who would be impacted by the temporary structure. During our discussions, we heard no objections and most of our neighbors were encouraged that this could help to expedite the timely completion of the Rte. 64 expansion project.

Thank you for your time and attention. Please let this letter serve as our support of this effort to assist in the expansion of Route 64.

Regards,

Michael W. Ritschdorff
C.E.O. and President

Christopher R. Doveala
VP Financial Administrative Services

LEVITON

June 17, 2012

City of St. Charles
Community Development Department
Ms. Rita Tungare, Director of Community Development
Two East Main Street
St. Charles, IL 60174

RE: 2900 Dukane Drive
PROPOSED CONCRETE BATCH PLANT

Dear Ms. Tungare:

We are tenants at 417 Stone Drive, St. Charles, IL, a property within 250 feet of captioned site.

We strongly object to a concrete batch plant being located in the vicinity of 417 Stone Drive for the following reasons:

- Dust and dirt would likely have an adverse impact on our manufacturing
- Noise, dust and dirt from the operation would inevitably affect our employees and visitors
- Truck traffic is likely to be disruptive to the business park and our access to our leased premises
- A heavy industrial use such as a concrete plant is not consistent with the kinds of uses of Leviton and other tenants in the park

We believe that St. Charles would not want to compromise the quiet enjoyment of the existing businesses in this business park. We ask that the applicant be directed to seek land in heavy industrial areas more suitable to their proposed use, and that the requestor's application for the captioned site be denied.

I may be reached by email at cdoveala@leviton.com or by telephone at 631-812-6414 if further information is required. I would appreciate being advised of your decision in this matter.

Sincerely,

Christopher Doveala

CC: 417 Stone Drive, LLC
Attn: Ronald J. Berrettini
1972 Shenandoah Lane
St. Charles, IL 60174

ST. CHARLES SINCE 1834	**AGENDA ITEM EXECUTIVE SUMMARY**	
	Title:	Recommend Approval of a Map Amendment, Amendment to a Special Use for a Planned Unit Development, and a PUD Preliminary Plan (Corporate Reserve Multi-Family Residential)
	Presenter:	Matthew O'Rourke

Please check appropriate box:

	Government Operations		Government Services
X	Planning & Development-(7/16/12)		City Council
	Public Hearing		

Estimated Cost:	NA	Budgeted:	YES		NO	

If NO, please explain how item will be funded:

Executive Summary:

Corporate Reserve Development, LLC. has submitted applications for a proposal to modify Lot 8 of the Corporate Reserve PUD from the approved office use to multi-family rental units. The details of this proposal are as follows:

- 331 multi-family units.
- 15 total multi-family buildings.
  - All residential buildings are 3 stories tall.
  - 5 buildings are shown as walk-outs.
- Fitness club/leasing office to the south of building # 12.
- 526 total off-street parking spaces.
- 2 monument identification signs.
  - 1 is located at the entrance to the development north of Woodward Drive.
  - 1 is located at the intersection of Rt. 64 and Corporate Reserve Blvd.
- The applicant's legal counsel has submitted a letter stating that the current annexation agreement is no longer applicable since the original agreement has exceeded the 20 year time limit. This item is currently under review by the City's legal counsel.

Plan Commission Recommendation

The Plan Commission held a public hearing on 6-5-12 to discuss the proposal.

The Plan Commission recommended approval of the proposal on 6-19-12. The vote was 4 AYE to 3 NAY. The dissenting voters cited the proposed density as the basis for their objection to the proposal.

Attachments: *(please list)*

Site Plans; BSB Design, Inc. dated 5/14/12; Preliminary Engineering Plans; Mackie Consultants, LLC.; dated 5/16/12; Landscape Plans; Kinsella Landscape, Inc.; dated 05/16/12; Sanitary Sewer Study; Wills, Burke, Kelsey and Associates; dated 4/24/2012; Memorandum to Sanitary Sewer Study; Wills, Burke, Kelsey and Associates; dated 5/7/2012; Memorandum to Sanitary Sewer Study; Wills, Burke, Kelsey and Associates; dated 5/21/2012; Draft Traffic Study; Hampton, Lenzini, and Renwick; dated 7/3/2012; Concept Plan Site Plan; BSB Design, Inc.; received 11/14/2011; Email from Paul Robertson – Housing Trust Fund Contribution; dated 6/1/12.

Recommendation / Suggested Action *(briefly explain)***:**

Recommend approval of an Application for a Map Amendment, an Application for an Amendment to a Special Use, and an Application for a PUD Preliminary Plan contingent upon resolution of any outstanding Staff Comments.

For office use only:	*Agenda Item Number: 3b*

Community Development
Planning Division
Phone: (630) 377-4443
Fax: (630) 377-4062

ST. CHARLES
SINCE 1834

Staff Report

TO: Chairman
And Members of the Government Operations Committee

FROM: Matthew O'Rourke, AICP
Planner

RE: Corporate Reserve Planned Unit Development (Multi-Family Residential)

DATE: July 3, 2012

I. APPLICATION INFORMATION:

Project Name: Corporate Reserve Multi-Family Residential Development

Applicant: Corporate Reserve Development, LLC. (Paul Robertson)

Purpose: Review of Proposed Changes to the approved Planned Unit Development from Office Development to Multi-Family Residential Development

General Information:

Site Information	
Location	Lot 8 located west of the existing office building and north of Woodward Drive, in the Corporate Reserve Business Park
Acres	22.63

Applications	**1) Amendment to Special Use for a Planned Unit Development**
	2) Map Amendment
	3) PUD Preliminary Plan
Applicable Zoning Code Sections	17.04.430 Changes in Planned Unit Developments 17.12 Residential Districts Table 17.12-2 Residential District Bulk Requirements
PUD ORD-2008-Z-18	"An Ordinance Rezoning Property and Granting a Special Use as a Planned Unit Developed for Corporate Reserve of St. Charles PUD (A Portion of the West Gate Property)"

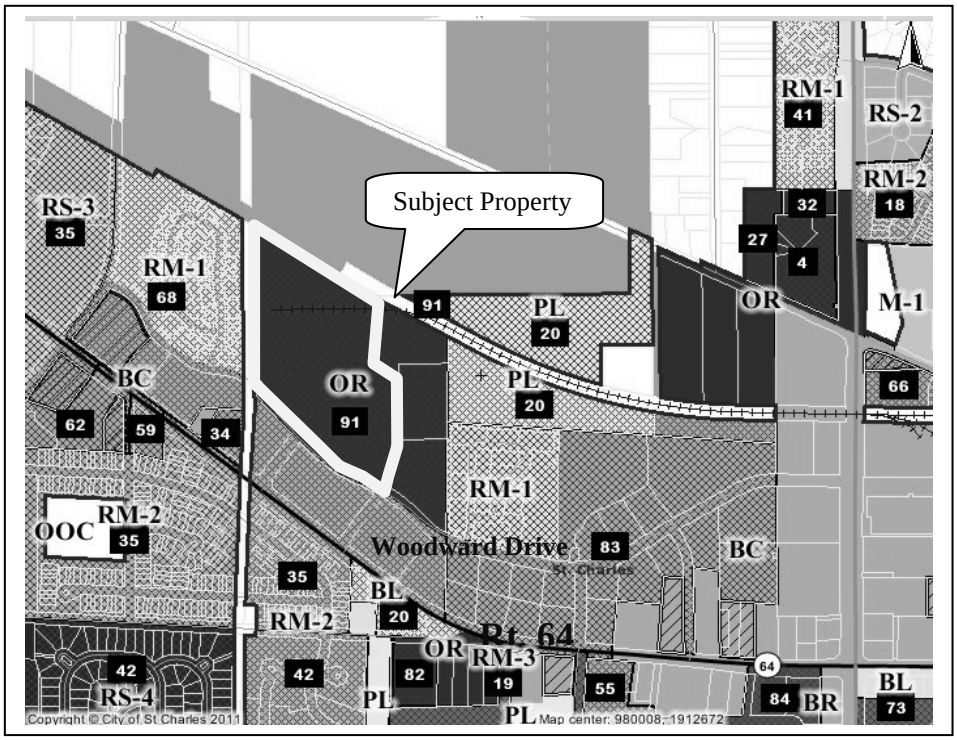
Existing Conditions	
Land Use	Vacant
Zoning	OR- Office and Research (PUD)

Zoning Summary		
North	Unincorporated Kane County/ PL Public Land	Forest Preserve
East	OR- Office and Research (PUD)	Vacant Office Land / Office Buildings
South	BC-Community Business (PUD)	Vacant
West	RM-1 Mixed Medium Density Residential District	Remington Glen Townhomes

Comprehensive Plan Designation
Business Enterprise

Aerial Photograph

Surrounding Zoning



II. BACKGROUND:

A. PROJECT HISTORY

In 2008, the Corporate Reserve Business Park was approved by Ordinance 2008-Z-18 "An Ordinance Rezoning Property and Granting a Special Use as a Planned Unit Developed for Corporate Reserve of St. Charles PUD (A Portion of the West Gateway Property)" on the former Cardinal Industries property. The 37.8 acre property was rezoned as follows:

- The portion of the property north of Woodward Drive was zoned OR – Office Research PUD (29.8 acres)
- The portion of the property south of Woodward Drive was zoned BC- Community Business PUD (8.00 acres)

In addition to the rezoning of the entire property, the development of the site was bifurcated into two phases in the following manner:

Phase I

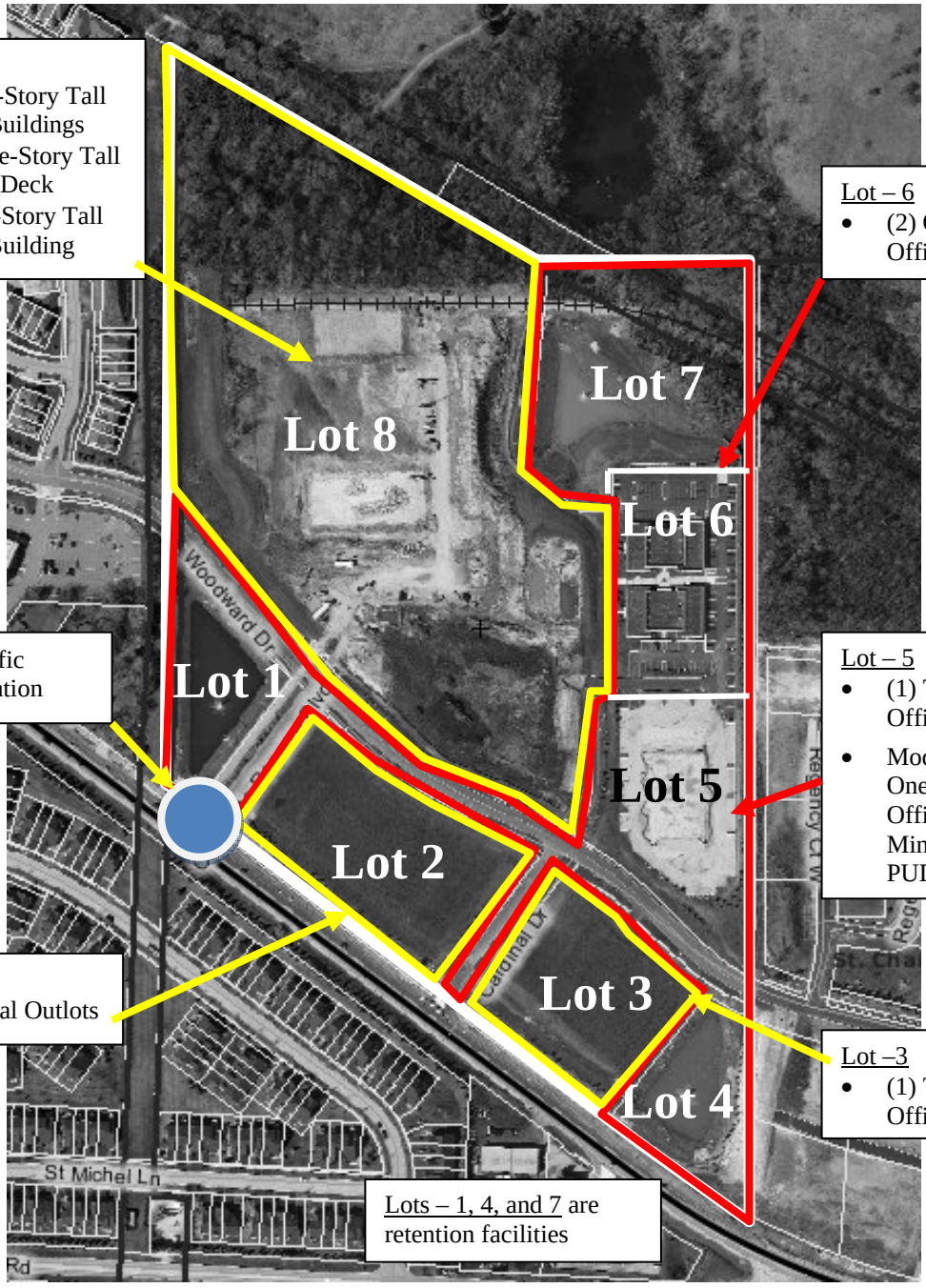
- A preliminary PUD Plan was approved for lots 1, 4, 5, 6, and 7 which included the majority of site infrastructure, retention ponds, and utility work. In Phase I, a combination of one and three-story offices building were approved on lots 5 and 6.
- At this time the 2 one story office buildings on lot 6, Woodward Drive, Corporate Reserve Blvd., and the retention ponds on lots 1, 4, 5, 6, and 7 have been constructed.

Phase II

- Lots 2, 3, and 8 of the site were not included in the PUD Preliminary Plan approval. Phase II included a combination of 2 five-story tall office buildings, 1 one-story office building, 1 three-story office building, 1 three-story parking deck along the western property line, and commercial outlots along Rt. 64.
- The construction of a traffic signal at the intersection of Rt.64 and Corporate Reserve Blvd. and related improvements to Rt. 64 was also contemplated as part of Phase II.

Staff has incorporated an illustration indicating the locations of the phases and lots originally contemplated in the Corporate Reserve development. This illustration also indicates the type of uses planned on those lots.

Original Corporate Reserve Lot Layout and Contemplated Uses



Lot – 8
- (2) Five-Story Tall Office Buildings
- (1) Three-Story Tall Parking Deck
- (1) One-Story Tall Office Building

Lot – 6
- (2) One-Story Tall Office Buildings

- Future Traffic Signal Location

Lot – 5
- (1) Three-Story Tall Office Building
- Modified to (2) One-Story Tall Office Buildings per Minor Change to PUD in 2011.

Lot – 2
- Commercial Outlots

Lot –3
- (1) Three-Story Tall Office Building

Lots – 1, 4, and 7 are retention facilities

Phase I

Phase II

B. CONCEPT PLAN REVIEW

1. Concept Plan Proposal

In the fall of 2011, Corporate Reserve Development, LLC. submitted an Application for a Concept Plan to seek feedback for a potential change to Lot 8 of the Corporate Reserve PUD from the approved office uses to multi-family rental units.

2. Plan Commission and Planning & Development Committee Concept Plan Comments

The Plan Commission held a public meeting on November 8, 2011 and the Planning and Development Committee held a public meeting on November 14, 2011 to discuss the Corporate Reserve multi-family Concept Plan. The following is a bullet point summary of the both the Commission and Committee's comments:

- There was general support for residential use on this portion of the Corporate Reserve property.
- The site layout should be more cohesive and streets should be planned in a regular grid-like pattern.
- The surface parking should be more dispersed and less visually prevalent.
- More open/park space for families and useable open space is needed.
- Preserve views to Leroy Oaks Forest Preserve and the surrounding properties.
- The 60 foot tall height of the proposed 4-story buildings is too tall when compared to the surrounding neighborhoods.
- Building Architecture:
  - Members of the Plan Commission felt that the applicant should consider an architectural style that is more compatible with surrounding developments or representative of the Midwest such as "Prairie Style".
  - Members of the Planning and Development Committee felt that the architecture of the proposed buildings was well designed.
- The proposed buildings should be setback an adequate distance from the Remington Glen development to the west.
- There were concerns stated regarding the number of proposed units.
- There should be a new traffic study to ensure that any traffic generated by the development is properly mitigated.

C. PROPOSAL

Corporate Reserve Development, LLC., represented by Paul Robertson, has submitted applications to modify the approved Special Use for a Planned Unit Development for the Corporate Reserve Business Park. The applicant is proposing to change Lot – 8 (northwest 22.63 acres) of the property to multi-family residential.

The following table details the current proposal and provides a comparison to the fall 2011 Concept Plan:

Development Category	Current Proposal	Concept Plan	Changes from the Concept Plan
Number of Units	331	407	Reduction from 407 to 331 units
Total Number of Multi-Family Buildings	15	14 including two mixed-use buildings	Increase in total multi-family buildings from 14 to 15
Maximum Building Height	45’	60’	Reduction of all 4-story buildings to 3-story buildings
Off-Street Parking Spaces	526	786	Reduction from 786 to 526 off-street parking spaces
Mixed Use Buildings	0	2	Mixed-use buildings no longer proposed
Fitness Club	1	1	Changes to the proposed architecture of the building

Other significant changes/additions to the current proposal from the Concept Plan:

- The site plan layout has been reconfigured to link the buildings with proposed open spaces.
- Greater links have been created between all proposed open and green spaces.
- The layout has been modified to a more grid-like pattern.
- 2 monument development identification signs.
  - 1 is located at the entrance to the development north of Woodward Drive.
  - 1 is located at the intersection of Rt. 64 and Corporate Reserve Blvd.

Staff has attached the Site Plan Submitted with the Concept Plan Application for comparative purposes.

D. COMPREHENSIVE PLAN

1. Land Use Designation

The current Comprehensive Plan Land Use designation for this property is Business Enterprise. Business Enterprise is defined as follows:

“Business Enterprise. Includes older manufacturing areas in transition and/or in need of rehabilitation. Uses include light assembly, processing or other uses suitable for rehabilitation of the area. The maximum Floor Area Ratio is 0.40.”

2. West Gateway Planning Component

This property is located in the West Gateway – Planning Component 18 subarea of the Chapter 13, Land Use of the Comprehensive Plan. The pertinent 2003 Future Land Use Directions from this component are:

- *Consider development of this area as a unified whole, maintaining the overall average residential density with strong relationships and transitions between different residential neighborhoods.*
- *The macro scale development pattern is retail commercial development along Randall Road; business enterprise, office and fairgrounds use in the next tier; and further west, higher density residential then lower density residential blending into county subdivisions.*

- *Behind the Randall Road frontage property west to the NiGas right of way should be developed for business enterprise uses. Support desired land uses with an interconnected network of streets west of Randall Road.*

3. Regency Estates Approval

In 2006, the City Council approved the Pine Ridge/Regency Estates PUD. The Regency Estates portion of this PUD is a residential development north of Woodward Drive.

It is important to note that the Regency Estates residential portion of that site is also designated as Business Enterprise in the Comprehensive Plan. However, the Staff Report dated 4-8-05, composed at the time of the original project and PUD approval, indicated that the Plan Commission and City Council considered the residential component appropriate during the concept plan review of this PUD. It was further stated that, given the site's unique development challenges, that residential units would act as a catalyst and fuel retail and business enterprise development in this area.

III. ANALYSIS

Staff performed a detailed plan review and analysis of the submitted plans. The following is a description of Staff's analysis:

A. SITE DESIGN

Staff analyzed the proposed plans, dated 5-14-12, to ensure that they comply with the standards listed in **Table 17.12-2 Residential District Bulk Requirements** for the RM-3 General Residential Zoning District. The following table details that review:

ZONING CATEGORY	ZONING ORDINANCE STANDARD (RM-3)		SUBMITTED PLANS
Minimum Lot Area (Acres)	Multi-Family 2,200 Square Feet per Dwelling Unit		2,671 Square Feet per Dwelling Unit
Minimum Lot Width (Feet)	65'		749'
Maximum Building Coverage	40%		21%
Setbacks			
Minimum Front Yard Parking and Building Setbacks from Woodward Drive	30'		12' ***(variance requested)***
Minimum Side Yard Building Setback from West Property Line	25'		25'
Minimum Side Yard Building Setback from East Property Line	25'		45'
Minimum Rear Yard Building Setback from North Property Line (Detention Parcel)	30'		10' **(variance requested)**
Maximum Building Height	45'		45'
Required Parking Spaces	Studio	1.2 Spaces per Dwelling Unit	**526 Total Spaces Proposed** *476 Spaces Required*
	1 Bed Room	1.2 Spaces per Dwelling Unit	
	2 Bed Room	1.7 Spaces per Dwelling Unit	

Proposed Site Design Variances

The applicant has requested two setback variances as follows:

1. Front Yard setback reduction from 30' to 12'.
2. Rear Yard setback reduction from 30' to 10'.

B. ARCHITECTURE

Staff has reviewed the proposed building elevations for conformance with the design standards stated in **Section 17.06.050 Standards and Guidelines – RM1, RM2, and RM3 Districts**. The following is summary of Staff's review:

- The buildings have been designed to include balconies, dormers, overhangs, and bump-outs to avoid the appearance of blank walls.
- Staff has reviewed the proposed exterior materials with the standards listed in **Section 17.06.050.F.2 Prohibited Materials**. None of the proposed materials indicated on the building elevations are prohibited.
- The building elevations indicate a uniform look and similar rooflines with enough variation to maintain visual interest.

C. LANDSCAPING

Staff reviewed the proposed Landscape Plan, dated 5-16-12, to ensure conformance with the applicable standards of **Chapter 17.26 Landscaping and Screening** of Title 17 the Zoning Ordinance. The following table summarizes that review:

The landscaping shown along Woodward Drive was approved as part of the 2008 Corporate Reserve PUD and has already been installed by the applicant.

1. Apartment Buildings and Overall Site

Category	Zoning Ordinance Standard	Proposed
Required Site Greenspace	20%	41%
Foundation Landscaping		
Trees	2 per every 50 lineal feet of building wall - (381 Required)	242 ***(Variance Requested)***
Bushes, Shrubs, and perennials	20 per every 50 lineal feet of building wall - (3,807 required)	6,008
Parking Lot Screening	50% of lineal footage from a public street up 30" in height	The appropriate screening has been provided in locations where proposed parking lots abut Woodward Drive.
Parking Lot Greenspace	10%	18.5%
Interior Parking Lot Trees	168	112

2. Club House

Category	Zoning Ordinance Standard	Proposed
Foundation Landscaping		
Trees	2 per every 50 lineal feet of building wall - (19 Required)	39
Bushes, Shrubs, and perennials	20 per every 50 lineal feet of building wall - (189 required)	872

3. Requested Variances

The applicant has requested the following variances to the standards of **Chapter 17.26 Landscaping and Screening**:

1. Reduction in the number of shades trees located in the interior of the proposed off-street parking lot areas from 168 to 112.
    - While there are a reduced number of trees shown in the interior area of the parking lots, there are a total of 366 proposed shade and evergreen trees distributed throughout the parking lot and site. This results in an increase of 198 more trees than required by the Zoning Ordinance.
    - The trees have been distributed throughout the greenspaces and boundaries of the site as opposed to placing them strictly in the interior of the parking lot.
2. Reduction in the number of ornamental, shade, or evergreen trees located around the foundation of the proposed apartment buildings from 381 to 242.
    - To accommodate the lack of required foundation trees, the applicant is proposing to distribute more bushes, shrubs, and perennials throughout the entire site. There are 3,996 bushes, shrubs, and perennials required around the foundations of all buildings in this development. The proposed Landscape Plans indicate that a total of 6,238 bushes, shrubs, and perennials will be distributed throughout the site.

D. SIGNS

The applicant is proposing two monument signs for this development. The design of the proposed signs is consistent with the standards of **Chapter 17.28 Signs**.

E. INCLUSIONARY HOUSING

Per the standards established in **Chapter 17.18 Inclusionary Housing**, the applicant is required to provide a total of 15% of the total unit count as affordable units. This would equate to a total of 50 affordable units.

Per **Section 17.18.050 Fee-In-Lieu of Affordable Units**, the applicant has the option to request that 50% of the required units be paid as a fee-in-lieu to the Housing Trust Fund and that 50% of the required units be constructed onsite. Based on the current fee-in-lieu amount of $104,500 per unit, this would result in a total fee-in-lieu amount of $2,612,500 and the construction of 25 onsite units.

Variance Request

The applicant is requesting a variance from the provisions of **Chapter 17.18 Inclusionary Housing** to provide zero onsite units as part of the application for an Amendment to the PUD. Paul Robertson, representing Corporate Reserve Development, LLC., has stated in an email dated 6-1-12 that they are able to make a reduced contribution of $50,000 to the Housing Trust Fund.

F. INFRASTRUCTURE

In order to ensure that adequate facilities exist or will be constructed as part of this development proposal, sanitary sewer capacity and traffic impact studies were conducted. The following is brief explanation of the two studies findings:

1. Sanitary Sewer Capacity Study

Wills, Burke, Kelsey and Associates (WBK) examined the sanitary sewer network to ensure that there is sufficient capacity to convey waste from the proposed development site. WBK examined the sewer pipes, lift stations, and total west side treatment plant facility capacity as part their study. WBK has determined that there is adequate sewer capacity to serve the full build out of the proposed development within the existing system. A draft copy of the study is attached to this memo.

2. Traffic Study

In 2008, when the Corporate Reserve PUD was approved, Hampton, Lenzini, and Renwick (HLR) studied the traffic impacts of the proposed office and retail uses contemplated at that time. That study (dated 1-8-2008) recommended certain improvements to the street network based on the original proposed uses.

HLR was hired to study the traffic impacts of the proposal for multi-family units, and analyze how this change in use would affect the improvements recommended as part of the 2008 Study. A draft of this study dated 5-11-12 is attached to this Memo. The following is a summary of those findings:

- HLR confirmed that the overall improvements contemplated in the 2008 study will be adequate to serve the proposed residential development.
- The proposed change from 490,000 square feet of office space to 331 multi-family units on lot 8 will result in a reduction in the total number of trips generated by the Corporate Reserve development.
- A traffic signal will be warranted at the intersection or Rt. 64 and Corporate Reserve Blvd. once all phases of the development are constructed.
- Additional through lanes in the east and westbound directions should be considered on Rt. 64 at the intersection with Peck Rd. Only a very small portion of the traffic at this intersection (1.8%) can be attributed to the Corporate Reserve proposal.
- The contemplated future traffic signal at Woodward Drive and Randall Road will divert some of the traffic from the proposed development away from Rt. 64 and Peck Rd. Traffic from the Corporate Reserve development will contribute to the justification of this signal.

These improvements will require review and approval from outside government agencies including the Illinois Department of Transportation and the Kane County

Department of Transportation. Based on the need for outside agency approval, the timing of these improvements has not yet been determined.

G. SCHOOL AND PARK DISTRICT CONTRIBUTIONS

The applicant is proposing to provide both the School and Park Districts with a cash contribution in lieu of physical land per the standards established in **Section 16.32.090 Criteria for requiring a cash contribution in lieu of park and school land** of **Title 16 Subdivisions and Land Improvement**.

The applicant has submitted a land cash worksheet that indicates the following contributions will be owed to the School and Park Districts:

- Park District - $1,439,762.87.
- School District - $270,705.12.

H. ANNEXATION AGREEMENT

The property is currently subject to an annexation agreement titled, "Thirteenth Amendment to and Restatement of Annexation Agreement City of St. Charles and West Gateway Property Owners (The Corporate Reserve of St. Charles PUD)" which was an amendment to and restatement of the original West Gateway annexation agreement approved in 1990. This annexation agreement amendment was approved in 2008 to accommodate the office park project.

The applicant's legal counsel, Rathje – Woodward, LLC. has submitted a letter stating that the current annexation agreement is no longer applicable since the original agreement has exceeded the 20 year time limit as stated in Section 11-15.1 of the Illinois Municipal Code. This item is currently under review by the City's legal counsel, The Law Offices of Gorski and Good. Based on the advice of legal counsel, the City Council will need to take action to either confirm that the agreement has expired or to direct Staff to work with the applicant to prepare an amendment to the existing agreement to accommodate the proposed residential project. If there are new provisions related to the proposed development that the Council would like to consider, then Staff and legal counsel will need to evaluate these provisions and determine if they can be accommodated through the PUD amendment or need to be included in an amended annexation agreement.

It should be noted that the majority of the provisions in the annexation agreement were also incorporated into Ordinance 2008-Z-18 "An Ordinance Rezoning Property and Granting a Special Use as a Planned Unit Developed for Corporate Reserve of St. Charles PUD (A Portion of the West Gate Property)", and will still be in effect even if the annexation agreement is considered expired.

IV. PLAN COMMISSION RECOMMENDATION

The Plan Commission held a public hearing on 6-5-12 to discuss the proposal.

The Plan Commission recommended approval of the proposal on 6-19-12. The vote was 4 AYE to 3 NAY.

The dissenting voters cited the proposed density as the basis for their objection to the proposal.

V. RECOMMENDATION

Recommend approval of the Application for a Map Amendment, the Application for an Amendment to a Special Use, and the Application for a PUD Preliminary Plan contingent upon resolution of any outstanding Staff Comments.

Staff has attached draft Findings of Fact to support this recommendation.

VI. ATTACHMENTS

- Site Plans; BSB Design, Inc. dated 5/14/12.
- Preliminary Engineering Plans; Mackie Consultants, LLC.; dated 5/16/12.
- Landscape Plans; Kinsella Landscape, Inc.; dated 05/16/12.
- Sanitary Sewer Study; Wills, Burke, Kelsey and Associates; dated 4/24/2012.
- Memorandum to Sanitary Sewer Study; Wills, Burke, Kelsey and Associates; dated 5/7/2012.
- Memorandum to Sanitary Sewer Study; Wills, Burke, Kelsey and Associates; dated 5/21/2012.
- Traffic Study; Hampton, Lenzini, and Renwick; dated 7/3/2012.
- Concept Plan Site Plan; BSB Design, Inc.; received 11/14/2011.
- Email from Paul Robertson – Housing Trust Fund Contribution; dated 6/1/12.

VII. PROPOSED FINDINGS OF FACT

MAP AMENDMENT TO REZONE PROPERTY FROM OR OFFICE RESEARCH TO RM-3 GENERAL RESIDENTIAL

1. **The existing uses and zoning of nearby property.**

   The subject property is surrounded by a mix of residential, open space, office, and commercial uses. The property to the north is park land and forest preserve. The property to the west is zoned RM-1 Mixed Medium Density and is an attached single-family residential development. The property immediately to the east is a part of the Corporate Reserve Business Park and is zoned OR Office/Research. This property is developed or planned to be developed as office. East of the Corporate Reserve property is the Pine Ridge/Regency Estates development and is zoned a combination of BC- Community Business and RM-1 Mixed Medium Density. The Regency Estates portion (north of Woodward Drive) of this development is being developed as a single-family detached residential development. The properties to the south are zoned as BC- Community Business and BR-Regional Business. These properties are in various stages of commercial/retail development.

   The surrounding properties consist of commercial/retail uses located along Rt. 64 and residential uses located north of Woodward Drive.

2. **The extent to which property values are diminished by the existing zoning restrictions.**

   The extent to which the property values are diminished by the existing zoning is not known. The subject property is located in an area west of Randall Road that is currently in transition. There are several approved developments both north and south of Rt. 64 (Pine Ridge Business Park and the Zylstra Development) that are in various stages of completion. However, there has been a lack of sustained commercial and office development for the last several years. Given the amount of available similarly zoned properties, the lack of development activity may diminish the value of this property as currently zoned.

3. **The extent to which the reduction of the property's value under the existing zoning restrictions promotes the health, safety, morals or general welfare of the public.**

   The property is currently graded and ready to be developed, but due to the lack of demand for new office space has remained dormant. Under the existing zoning, the site will continue to have unfinished site improvements, landscape installation, and no permanent structures, until there is greater demand for office uses.

4. **The suitability of the property for the purposes for which it is presently zoned, i.e. the feasibility of developing the property for one or more of the uses permitted under the existing zoning classification.**

   The property is currently zoned OR-Office Research PUD and is part of a development that is specifically approved as an office park. The site is suitable for this use; however, due to the lack of demand for office development in the area, the feasibility of this land developing as office has been significantly diminished.

5. **The length of time that the property has been vacant, as presently zoned, considered in the context of the land development in the area where the property is located.**

The land was rezoned in 2008 as part of Ordinance 2008-Z-18 "An Ordinance Rezoning Property and Granting a Special Use as a Planned Unit Developed for Corporate Reserve of St. Charles PUD (A Portion of the West Gate Property)" Since that approval the property has remained vacant.

6. The evidence, or lack of evidence, of the community's need for the uses permitted under the proposed district.

The continued lack of commercial and office development on the subject and surrounding properties highlights the decreased demand for the current permitted uses. The infusion of increased residential units could act as a catalyst to spur development for the adjacent and nearby undeveloped commercial and office properties.

7. The consistency of the proposed amendment with the City's Comprehensive Plan.

The Comprehensive Plan land use designation for this property is Business Enterprise. This designation is geared towards a mix of light manufacturing, distribution, offices, hospitality, and business services and does not include residential uses.

However, in 2005, The City Council approved the Regency Estates portion of the Pine Ridge /Regency Estates PUD, which is also designated as Business Enterprise by the Comprehensive Plan. At that time, it was stated that residential units would act as a catalyst and fuel retail and business enterprise development along Rt. 64 and Randall Road. Therefore, this amendment will continue this trend by permitting construction of new residential units north of Woodward Drive.

The Comprehensive Plan does not designate this site for residential use; therefore, no density level is specified for this property. The proposed RM-3 Zoning District will permit a density up to a maximum of 19.8 dwelling units per acre. Comprehensive Plan Chapter 13 Land Use, Subsection II, Subsection B, Section Residential Density states that, Most new development should fall within the 10 du/acre limitation. However this section further states, "Exceptions may be made for unique projects which demonstrate a substantial benefit to the Community." The Comprehensive plan recommends that all such higher density projects should be subject to a Special Use (PUD) so that any impacts on adjoining properties, traffic, utilities, and other factors can be assessed and controlled.

8. Whether the proposed amendment corrects an error or omission in the Zoning Map.

Not Applicable

9. The extent to which the proposed amendment creates nonconformities.

The site is currently vacant; therefore, the proposed amendment will not create any nonconformities.

10. The trend of development, if any, in the general area of the property in question.

The general trend of the adjacent properties is for the location of commercial and office uses along Rt. 64 and residential uses north of Woodward Drive.

AMENDMENT TO SPECIAL USE FOR A PUD ORDINANCE
2008-Z-18 "AN ORDINANCE REZONING PROPERTY AND GRANTING A SPECIAL USE AS A PLANNED UNIT DEVELOPED FOR CORPORATE RESERVE OF ST. CHARLES PUD (A PORTION OF THE WEST GATEWAY PROPERTY)"

From the St. Charles Zoning Ordinance, Section 17.04.410.D.3:
The Plan Commission shall not favorably recommend, and the City Council shall not approve, a Special Use for a PUD or an amendment to a Special Use for a PUD unless they each make findings of fact based on the application and the evidence presented at the public hearing that the PUD is in the public interest, based on the following criteria:

i. The proposed PUD advances one or more of the purposes of the Planned Unit Development procedure stated Section 17.04.400.A.

The proposed PUD advances the following purposes stated in Section 17.04.400.A Purposes:

Purpose # 2 states the following, "To create places oriented to the pedestrian that promote physical activity and social interaction, including but not limited to walkable neighborhoods, usable opens space, and recreation facilities for the enjoyment of all." The proposed multi-family residential development incorporates a variety of greenspaces and clubhouse facility to promote social and physical activity for potential residents. The site plan includes a network of sidewalks and bicycle paths to connect the site to an existing network of bike trails and surrounding properties. This layout will encourage residents to walk or bike to nearby park and open space facilities such as Leroy Oaks, Renaux Manor Park, and James O. Breen Park. This location may also encourage walking to adjacent businesses.

Purposes #3 states the following, "To encourage a harmonious mix of land uses and a variety of housing types and process." The proposed development encourages the continued development pattern of residential uses north of Woodward Drive. This development will create an additional housing type that does not currently exist west of Randall Road in St. Charles.

ii. The proposed PUD and PUD Preliminary Plans conform to the requirements of the underlying zoning district or districts in which the PUD is located and to the applicable Design Review Standards contained in Chapter 17.06, except where:

a) Conforming to the requirements would inhibit creative design that serves community goals, or

The proposed development does comply with the standards established per the proposed underlying RM-3 General Residential Zoning District except for the following proposed deviations:

Site Plan Design Variances:
1. Front Yard setback reduction from 30' to 12'.
2. Rear Yard setback reduction from 30' to 10'.

These variances are being proposed to create a more "grid-like" layout of the proposed multi-family residential buildings. This layout will help facilitate efficient pedestrian and

vehicular traffic flow as well as accommodate larger vehicles such as fire and garbage trucks.

Landscape Variances:

1. Reduction in the number of shades trees located in the interior of the proposed off-street parking lot areas from 168 to 112.
2. Reduction in the number of ornamental, shade, or evergreen trees located around the foundation of the proposed apartment buildings from 381 to 242.

The requested variances will allow a more creative landscape design and result in a greater amount of landscape materials placed throughout the site in a comprehensive manner. Per Chapter 17.26 Landscaping and Screening, the vegetation is required to be concentrated in the interior of the parking lot and around the foundation of the multi-family buildings. The proposed landscape plan indicates that a significantly increased amount of vegetation from 3,996 to 6,238 bushes, shrubs, and perennials is proposed to be spread throughout the entire site. This will enhance the visual aesthetics of the entire site as opposed to just concentrating the landscaping in limited areas.

b) Conforming to the requirements would be impractical and the proposed PUD will provide benefits that outweigh those that would have been realized by conforming to the applicable requirements.

Factors listed in Section 17.04.400.B shall be used to justify the relief from requirements.

1. The PUD will provide community amenities beyond those required by ordinance, such as recreational facilities, public plazas, gardens, public art, pedestrian and transit facilities.

The proposed PUD Preliminary plans show a number of internal green and open spaces that can be used for passive recreation. The plan also includes a number of pedestrian and bike path facilities that will connect to the regional park system and Leroy Oaks Forest Preserve.

2. The PUD will preserve open space, natural beauty and critical environmental areas in excess of what is required by ordinance or other regulation.

The site is currently graded and ready for development. 41% of the proposed multi-family residential layout will be dedicated to greenspace. The Zoning Ordinance requires that 20% of the site be dedicated to greenspace.

3. To encourage a harmonious mix of land uses and a variety of housing types and prices.

The proposed multi-family residential uses will continue the surrounding area's land use trend of commercial and office uses being located adjacent to Rt. 64 and residential uses located north of Woodward Drive. The proposed multi-family residential use will create a new type of residential housing than the surrounding residential developments. The proposed use will create an appropriate land use transition from the commercial uses to the south and east with the residential uses to the west.

4. The buildings within the PUD offer high quality architectural design.

The proposed architecture of the multi-family residential and clubhouse buildings is consistent with the requirements established in **Section 17.06.050 Standards and Guidelines – RM1, RM2, and RM3 Districts.** The proposed elevations show a mix of materials and interesting design features.

5. The PUD provides for energy efficient building and site design.

Energy efficiency standards for the buildings have not been identified.

6. The PUD provides of the use of innovative stormwater management techniques.

The PUD Preliminary Plans include a stormwater management system in compliance with City Code requirements.

7. The PUD provides accessible dwelling units in numbers or with features beyond what is required by the Americans with Disabilities Act (ADA).

The proposed buildings will comply with the standards of the Americans with Disabilities Act. The applicant has stated at the public hearing that the required number of accessible units will be provided.

8. The PUD provides affordable dwelling units in conformance with, or in excess of, City policies and ordinances.

The applicant has requested a deviation from the provisions of Chapter 17.18 Inclusionary Housing and will not be providing affordable housing units onsite and will not be paying a fee-in-lieu at the level required by the ordinance.

Instead, the applicant has proposed to contribute $50,000 to the Housing Trust Fund to support the City of St. Charles' affordable housing efforts.

9. The PUD preserves historic building, sites, or neighborhoods.

Not Applicable

iii. The proposed PUD conforms with the standards applicable to Special Uses (Section 17.04.330.C.2).

a. Public Convenience: The Special Use will serve the public convenience at the proposed location.

A Special Use for a Planned Unit Development is already approved on this site. The proposed amendment will permit the construction of a multi-family residential development.

The addition of new residential units within a close proximity to employment and shopping destinations will create new potential customers for existing business and may foster the development of the surrounding commercial and office properties.

b. Sufficient Infrastructure: That adequate utilities, access roads, drainage and/or necessary facilities have been, or are being, provided;

The utilities and infrastructure already exist on or immediately adjacent to the site. These improvements were constructed as part of the overall Corporate Reserve Planned Unit Development.

As part of this proposal, the impacts to both the surrounding road system and sanitary sewer system have been studied to compare the impacts of the proposed residential use to the approved office uses. Both studies have determined that there are sufficient road and sanitary sewer capacity, existing and planned, to accommodate the proposed residential use.

c. Effect on Nearby Property: That the Special Use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish or impair property values within the neighborhood;

The amendment to the existing Special Use for the PUD will permit the development of multi-family homes as opposed to office buildings and multi-story parking deck structures which could be built to a maximum of five-stories tall. The visual intensity of the proposed use will be less than the use that is currently permitted on this site.

The proposed multi-family residential use will generate a decreased number of peak hour traffic trips when compared to the current permitted uses.

d. Effect on Development of Surrounding Property: That the establishment of the Special Use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

The surrounding properties are already developed or located within PUDs that contain specific development standards and entitlements. This amendment to the Special Use for a PUD will not affect the orderly development of those properties as they are already developed or entitled to develop. The proposed use will create an appropriate land use transition from the commercial uses to the south and east with the residential uses to the west.

The proposed residential uses will also create an increased number of residents in the area that may help spur the development of the surrounding properties.

e. Effect on General Welfare: That the establishment, maintenance or operation of the Special Use will not be detrimental to or endanger the public health, safety, comfort or general welfare.

The property is currently graded and ready to be developed, but due to the lack of demand for new office space the site has remained dormant. This amendment to the Special Use for a PUD will provide for the timely development of the site.

f. Conformance with Codes: That the proposed Special Use conforms to all existing Federal, State and local legislation and regulation and meets or exceeds all applicable provisions of this Title, except as may be varied pursuant to a Special Use for Planned Unit Development.

This Special Use for a PUD amendment will conform to all applicable regulations with the exception of the variances requested as part of this amendment.

iv. The proposed PUD will be beneficial to the physical development, diversity, tax base and economic well-being of the City.

The office development has remained inactive for three years. The change to permit multi-family units as opposed to office buildings will result in the continued physical development of the site. The modification to the permitted uses will add to the diversity of residential uses west of Randall Road. Continued development of the site will ultimately add to the tax base and economic well-being of the City, as opposed to a vacant property.

v. The proposed PUD conforms to the purposes and intent of the Comprehensive Plan.

The Comprehensive Plan land use designation for this property is Business Enterprise. This designation is geared towards a mix of light manufacturing, distribution, offices, hospitality, and business services and does not include residential uses.

However, in 2005, The City Council approved the Regency Estates portion of the Pine Ridge /Regency Estates PUD, which is also designated as Business Enterprise by the Comprehensive Plan. At that time, it was stated that residential units would act as a catalyst and fuel retail and business enterprise development along Rt. 64 and Randall Road. Therefore, this amendment will continue this trend and further act as a catalyst for commercial development by permitting the construction of new residential units.

The Comprehensive Plan does not designate this site for residential use; therefore, no density level is specified for this property. The proposed RM-3 Zoning District will permit a density up to a maximum of 19.8 dwelling units per acre. Comprehensive Plan Chapter 13 Land Use, Subsection II, Subsection B, Section Residential Density states that, Most new development should fall within the 10 du/acre limitation. However this section further states, “Exceptions may be made for unique projects which demonstrate a substantial benefit to the Community.” The Comprehensive plan recommends that all such higher density projects should be subject to a Special Use (PUD) so that any impacts on adjoining properties, traffic, utilities, and other factors can be assessed and controlled.

The density requested through the Amendment to the Special Use for a Planned Unit Development is 14.62 dwelling units per acre. The traffic and utilities have been studied and it has been determined that there is adequate capacity to serve the proposed development. The proposed residential development is located within close proximity to land uses (park/recreation areas, commercial services, employment centers) and infrastructure (regional arterial roadways – Rt. 64 and Randall Road.) which can support the requested density.

CITY OF ST. CHARLES

TWO EAST MAIN STREET
ST. CHARLES, ILLINOIS 60174-1984

COMMUNITY DEVELOPMENT/PLANNING DIVISION PHONE: (630) 377-4443 FAX: (630) 377-4062

ZONING MAP AMENDMENT APPLICATION

RECEIVED
St. Charles, IL
MAR 27 2012
CDD
Planning Division

Received Date

CITYVIEW
Project Name: Corporate Reserve Apartments
Project Number: 2007 -PR- 004
Application Number: 2012 -AP- 008

Instructions:

To request a zoning map amendment (rezoning) for a property, complete this application and submit it with all required attachments to the Planning Division.

City staff will review submittals for completeness and for compliance with applicable requirements prior to establishing a Plan Commission public hearing or meeting date.

The information you provide must be complete and accurate. If you have a question please call the Planning Division and we will be happy to assist you.

1. Property Information:	Parcel Number (s): 09-29-326-001	
	Street Address (or common location if no address is assigned): North side of Woodward Drive at Corporate Reserve Boulevard	
2. Applicant Information:	Name: Corporate Reserve Development, LLC	Phone: 847 348 7800
	Address: 1930 N. Thoreau Drive, Suite 175 Schaumburg IL 60173	Fax: 847 348 7801
		Email: p-roberts@JCFRE.com
3. Record Owner Information:	Name: St. Charles Fairgrounds Office Park Investors LLC	Phone: 847 348 7800
	Address: 1930 N. Thoreau Drive Suite 175 Schaumburg IL 60173	Fax: 847 348 7801
		Email: p-roberts@JCFRE.com
4. Billing: *To whom should costs for this application be billed?*	Name: Corporate Reserve Development	Phone: 847 348 7800
	Address: 1930 N. Thoreau Drive Suite 175 Schaumburg IL 60173	Fax: 847 348 7801
		Email: p-roberts@JCFRE.com

Zoning and Use Information:

Comprehensive Plan Land Use Designation of the property: Business Enterprise

Current zoning of the property: OR- Office Research

Is the property a designated Landmark or in a Historic District? NO

Current use of the property: Vacant land

Proposed zoning of the property: RM-3

Proposed use of the property: Multifamily residential

If the proposed Map Amendment is approved, what improvements or construction are planned? (An accurate site plan may be required to establish that the proposed improvement can meet the minimum zoning requirements)

We plan to develop a 331-unit luxury apartment community on the site. The project will include 15 3-story apartment buildings plus a clubhouse/amenity building.

Attachment Checklist

- ☐ **APPLICATION:** Completed application form signed by the applicant.
- ☐ **APPLICATION FEE:** Application fee in accordance with Appendix B of the Zoning Ordinance.
- ☐ **REIMBURSEMENT OF FEES AGREEMENT:** An original, executed Reimbursement of Fees Agreement and deposit of funds in escrow with the City, as provided by Appendix B of the Zoning Ordinance.
- ☐ **PROOF OF OWNERSHIP and DISCLOSURE:**

  a) A current title policy report; or

  b) A deed and a current title search.

  If the owner is not the applicant, an original letter of authorization from the owner permitting the applicant to act on his/her behalf is required. If the owner or applicant is a Trust, a disclosure of all beneficiaries; if the owner or applicant is a Partnership, a disclosure of all partners; if the owner or applicant is a Corporation, a disclosure of all owners with an interest of at least ten percent (10%).
- ☐ **LEGAL DESCRIPTION:** For entire subject property, on 8 ½ x 11 inch paper
- ☐ **PLAT OF SURVEY:**

  A current plat of survey for the Subject Realty showing all existing improvements on the property, prepared by a registered Illinois Professional Land Surveyor.
- ☐ **SITE PLAN:**

  Simple site plan drawn to scale to demonstrate that the property can meet the requirements of the proposed zoning district (parking requirements, setbacks, landscaping, etc.)
- ☐ **SOIL AND WATER CONSERVATION DISTRICT APPLICATION:**

  Copy of completed Land Use Opinion application as required by state law, as submitted to The Kane-Dupage Soil and Water Conservation District. http://www.kanedupageswcd.org/

❑ **ENDANGERED SPECIES REPORT:**

Copy of Endangered Species Consultation Agency Action to be filed with the Illinois Department of Natural Resources. http://dnrecocat.state.il.us/ecopublic/

I (we) certify that this application and the documents submitted with it are true and correct to the best of my (our) knowledge and belief.

Record Owner — Date: 03/26/12

Applicant or Authorized Agent — Date: 03/26/12

Finding of Fact Sheet – Map Amendment

The St. Charles Zoning Ordinance requires the Plan Commission to consider the factors listed below in making a recommendation to the City Council.

As the Applicant, the "burden of proof" is on you to show how your proposed Special Use will comply with each of the following standards. Therefore, you need to "make your case" by explaining how the following factors support your proposal. If a factor does not apply to the property in question, indicate "not applicable" and explain why it does not apply.

Corporate Reserve Apartments **March 26, 2012**
Ordinance 2008-Z-18

From the St. Charles Zoning Ordinance, Section 17.04.320.D:
In making its recommendation to grant or deny an application for a Zoning Map Amendment, including changes to Zoning District and Overlay boundaries, the Plan Commission shall consider:

1. The existing uses and zoning of nearby property. *(Relate the proposed land use and zoning to the land use and zoning of other properties in the area.)*

   The proposed residential use is consistent with the residential uses to the east, west and south of the site. Further, the residential use is consistent with the use of the land immediately north which is recreational/forest preserve land.

2. The extent to which property values are diminished by the existing zoning restrictions. *(Compare the value of the subject property to nearby properties under the current zoning to their potential value under the proposed zoning.)*

   The current OR – Office/Research zoning allows for commercial buildings similar to some of the available land in Pine Ridge Park immediately east of the subject. The value of commercial land in the area has been significantly compromised by the deep and protracted poor economic conditions. Office land value has been hurt by negative job growth.

3. The extent to which the reduction of the property's value under the existing zoning restriction promotes the health, safety, morals and general welfare of the public. *(If the existing zoning decreases the value of the subject realty, does it also produce any perceptible public benefits?)*

   The current OR – Office/Research zoning does not produce any perceptible public benefits aside from potential future tax base contributions if/when the site is eventually developed for that use.

4. The suitability of the property for the purposes for which it is presently zoned, i.e. the feasibility of developing the property for one or more of the uses permitted under the existing zoning classification. *(Can the subject property reasonably be used for any of the uses currently*

permitted? Physical and market conditions may be considered.)

The market for commercial office space does not support large-scale office development. Rental rates have fallen and bank financing is not readily available so feasibility of new development under the existing zoning is extremely limited. These changes are not forecast to change in the foreseeable future.

5. The length of time that the property has been vacant, as presently zoned, considered in the context of the land development in the area where the property is located. *(If a property has been vacant longer than other similar properties in the area, it may be an indicator that the existing zoning is inappropriate.)*

   The subject site has been vacant since the property was zoned OR – Office/Research in May 2008. Properties immediately east and west of the site have experienced construction of residential units since the subject zoning was put in place.

6. The evidence or lack of evidence, of the community's need for the uses permitted under the proposed district. *(Development trends, market forces, and the Comprehensive Plan may be considered.)*

   The housing collapse that has been experienced throughout the United States has caused a fundamental shift from owner-occupied housing the rental housing. Home ownership rates across the country have declined, creating large demand for rental housing. In addition to households who have lost their homes to foreclosure, there are many potential home buyers who are electing to rent until the housing market stabilizes. These elective renters demand modern, Class A apartment properties with abundant amenities. The lack of this product in the housing stock has forced these high quality renters out of St. Charles and into other markets.

7. The consistency of the proposed amendment with the City's Comprehensive Plan.

   While the proposed amendment is not consistent with the City's Business Enterprise designation in the Comprehensive Plan, the proposed amendment is consistent with surrounding land uses.

8. Whether the proposed amendment corrects an error or omission in the Zoning Map.

   It does not correct and error or omission in the Zoning Map.

9. The extent to which the proposed amendment creates nonconformities. *(Generally, it is not appropriate to rezone a property unless it can comply with the requirements of the new zoning.)*

   Several minor nonconformities are being requested as part of the PUD application to allow for land planning and architectural elements that will enhance the overall appearance, functionality

and openspace in the proposed development.

10. The trend of development, if any, in the general area of the property in question. *(New development, redevelopment, changes in use, or other changes in the area may help to justify a change in zoning.)*

    Residential construction is currently underway immediately east of the subject site in Regency Estates. Additionally, residential construction has recently been completed in Remington Glen immediately west of the site. In contrast, no new commercial development has been started since 2008 in Pine Ridge Park which fronts Main Street immediately east of the subject.

Plan Commission recommendation shall be based upon the preponderance of evidence presented and the Commission shall not be required to find each Finding of Fact in the affirmative to recommend approval of an application for Map Amendment.

CITY OF ST. CHARLES

Two East Main Street
St. Charles, Illinois, 60174-1984
Community Development/Planning Division Phone: (630) 377-4443 Fax: (630) 377-4062

Special Use Application

Cityview Project No.: 2007PB004
Cityview Application No.: 2012AP007
Project Name: Corporate Reserve Apartments

Instructions:

To request a Special Use for a property, complete this application and submit it with all required attachments to the Planning Office.

The City staff will review submittals for completeness and for compliance with applicable requirements prior to establishing a Plan Commission public hearing or meeting date.

The information you provide must be complete and accurate. If you have a question please call the Planning Office and we will be happy to assist you.

1. Property Information:	Parcel Number(s): 09-29-326-001	
	Street Address (or common location if no address is assigned) North side of Woodward Drive at Corporate Reserve Boulevard	

2. Applicant Information:	Name: Corporate Reserve Development, LLC	Phone: 847-348-7800
	Address: 1930 N. Thoreau Drive, Suite 175 Schaumburg, IL 60173	Fax: 847-348-7801
		Email: p-robertson@jcfre.com

3. Record Owner Information:	Name: St. Charles Fairgrounds Office Park Investors, LLC	Phone: 847-348-7800
	Address: 1930 N. Thoreau Drive, Suite 175 Schaumburg, IL 60173	Fax: 847-348-7801
		Email: p-robertson@jcfre.com

4. Billing: *To whom should costs for this application be billed?*	Name: Corporate Reserve Development, LLC	Phone: 847-348-7800
	Address: 1930 N. Thoreau Drive, Suite 175 Schaumburg, IL 60173	Fax: 847-348-7801
		Email: p-robertson@jcfre.com

Information Regarding Proposed Amendment to Special Use:

Comprehensive Plan designation of the property: Business Enterprise

Is the property a designated Landmark or in a Historic District? No

What is the property's current zoning? OR – Office/Research District

What is the property currently used for? Vacant land

What Special Use(s) are you applying for? Please select from the list of Special Uses in the Zoning Ordinance for the appropriate zoning district.

We are proposing to change the underlying zoning of the property to RM3 – General Residential Zoning District.

If the proposed Special Use is approved, what improvements or construction are planned?

We plan to develop a 331-unit luxury apartment community on the site. The project will include 15 3-story apartment buildings (some with additional walk-out level) plus a clubhouse/amenity building for use by residents of the property.

For Special Use Amendments only:

What Special Use ordinance do you want to amend? Ordinance No. 2008-Z-18

Why is the proposed change necessary?

The underlying OR – Office/Research District zoning must be amended to RM3 – General Residential Zoning District to allow for development of multifamily apartment community.

What are the proposed amendments? (Attach proposed language if necessary)

Ordinance No. 2008-Z-18 will be modified to reflect the changes to the underlying zoning.

Note for existing buildings:
If your project involves using an existing building, whether you plan to alter it or not, please contact the St. Charles Fire Department (630-377-4458) and the Building and Zoning Department (630-377-4406) for information on building, life safety and other code requirements. Depending on the proposed use, size of structure and type of construction, these requirements can result in substantial costs.

Attachment Checklist

- ☐ **APPLICATION:** Completed application form signed by the applicant
- ☐ **APPLICATION FEE:** Application fee in accordance with Appendix B of the Zoning Ordinance.
- ☐ **REIMBURSEMENT OF FEES AGREEMENT:** An original, executed Reimbursement of Fees Agreement and deposit of funds in escrow with the City, as provided by Appendix B of the Zoning Ordinance.
- ☐ **PROOF OF OWNERSHIP and DISCLOSURE:**

  a) A current title policy report; or

  b) A deed and a current title search.

If the owner is not the applicant, an original letter of authorization from the owner permitting the applicant to act on his/her behalf is required. If the owner or applicant is a Trust, a disclosure of all beneficiaries; if the owner or applicant is a Partnership, a disclosure of all partners; if the owner or applicant is a Corporation, a disclosure of all owners with an interest of at least ten percent (10%).

- ☐ **LEGAL DESCRIPTION:** For entire subject property, on 8 1/2 x 11 inch paper
- ☐ **PLAT OF SURVEY:**

A current plat of survey for the Subject Realty showing all existing improvements on the property, prepared by a registered Illinois Professional Land Surveyor.

- ☐ **SOIL AND WATER CONSERVATION DISTRICT APPLICATION:**

Copy of completed Land Use Opinion application as required by state law, as submitted to The Kane-Dupage Soil and Water Conservation District. http://www.kanedupageswcd.org/

- ☐ **ENDANGERED SPECIES REPORT:**

Copy of Endangered Species Consultation Agency Action to be filed with the Illinois Department of Natural Resources. http://dnrecocat.state.il.us/ecopublic/

- ☐ **TRAFFIC STUDY:** If requested by the Director of Community Development.
- ☐ **PLANS:**

All required plans shall be drawn on sheets no larger than 24" x 36", unless the Director of Community Development permits a larger size when necessary to show a more comprehensive view of the project. All required plans shall show north arrow and scale, and shall be drawn at the same scale (except that a different scale may be used to show details or specific features). All plans shall include the name of the project, developer or owner of site, person or firm preparing the plan, and the date of plan preparation and all revisions.

Copies of Plans:

- Initial Submittal - Fifteen (15) full size copies, Three (3) 11" by 17", and a PDF electronic file on a CD-ROM.

- Revision Submittal for Plan Commission - Twenty-Two (22) full size copies, Three (3) 11" by 17" and a PDF electronic file on a CD-ROM

☐

☐ **SITE PLAN (Note: For a Special Use for PUD, submit PUD Preliminary Plan Application in lieu of Site Plan)**

A plan or plans showing the following information:

1. Accurate boundary lines with dimensions
2. Streets on and adjacent to the tract: Name and right-of-way width
3. Location, size, shape, height, and use of existing and proposed structures
4. Location and description of streets, sidewalks, and fences
5. Surrounding land uses
6. Date, north point, and scale
7. Ground elevation contour lines
8. Building/use setback lines
9. Location of any significant natural features
10. Location of any 100-year recurrence interval floodplain and floodway boundaries
11. Location and classification of wetland areas as delineated in the National Wetlands Inventory
12. Existing zoning classification of property
13. Existing and proposed land use
14. Area of property in square feet and acres
15. Proposed off-street parking and loading areas
17. Angle of parking spaces
18. Parking space dimensions and aisle widths
19. Driveway radii at the street curb line
20. Width of driveways at sidewalk and street curb line
21. Provision of handicapped parking spaces
22. Dimensions of handicapped parking spaces
23. Depressed ramps available to handicapped parking spaces
24. Location, dimensions and elevations of freestanding signs
25. Location and elevations of trash enclosures
26. Provision for required screening, if applicable
27. Exterior lighting plans showing:
    a. Location, height, intensity and fixture type of all proposed exterior lighting
    b. Photometric information pertaining to locations of proposed lighting fixture Number of parking spaces provided, and number required by ordinance

I (we) certify that this application and the documents submitted with it are true and correct to the best of my (our) knowledge and belief.

Record Owner _____ Date 03/26/12

Applicant or Authorized Agent _____ Date 03/26/12

Finding of Fact Sheet – Special Use

The St. Charles Zoning Ordinance requires the Plan Commission to consider the factors listed below in making a recommendation to the City Council.

As the Applicant, the "burden of proof" is on you to show how your proposed Special Use will comply with each of the following standards. Therefore, you need to "make your case" by explaining specifically how your project meets each of the following standards.

Corporate Reserve Apartments **March 26, 2012**
Ordinance 2008-Z-18

A. Public Convenience: The Special Use will serve the public convenience at the proposed location;

The proposed Special Use will allow for the development of a modern, Class A multifamily rental residential community. This property type is not currently available and will add to the housing stock of St. Charles. Fundamental shifts in the housing market have created significant unmet demand for high quality rental housing. Further, the proposed special use will add to the growth on the dynamic west side of St. Charles where significant commercial development has occurred.

The development will generate significant real estate and sales tax revenue without adding a material burden to city services.

B. Sufficient Infrastructure: That adequate utilities, access roads, drainage and/or necessary facilities have been, or are being, provided;

Roadway improvements have already been completed as part of the Corporate Reserve to further enhance traffic flow on SRA Route 64. Further, we have already completed the connection of Woodward Drive from its former termini on the east and west of the site which now provides an alternative to travel on Main Street.

Sanitary sewer, storm sewer, water and electric capacities have all been designed in anticipation of the development of this site. Connection points to all utilities have been provided in proximity to the subject site. The stormwater management systems have been designed to provide adequate capacity for the site and all existing flow from adjacent sites.

C. Effect on Nearby Property: That the Special Use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish or impair property values within the neighborhood;

The proposed Special Use will enhance the surrounding properties by blending with the existing residential developments to the west, east and south of the property. The high quality of the development will enhance the value of properties within the neighborhood.

D. Effect on Development of Surrounding Property: That the establishment of the Special Use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

The proposed Special Use will enhance the development of surrounding properties by adding to the housing stock. The rental nature of the Special Use will not compete with existing for sale product and will enhance the value by providing a complimentary residential use.

E. Effect on General Welfare: That the establishment, maintenance or operation of the Special Use will not be detrimental to or endanger the public health, safety, comfort or general welfare.

The Special Use will not be detrimental to or endanger the public health, safety, comfort or general welfare of the citizens of St. Charles. The Special Use will allow the property to serve as an asset to the community and will generate substantial revenue for the City's use. The high quality of the product will attract citizens interested in renting in St. Charles who currently do not have a modern, Class A alternative. The property will be attractive to a wide range of residents.

F. Conformance with Codes: That the proposed Special Use conforms to all existing Federal, State and local legislation and regulation and meets or exceeds all applicable provisions of this Title, except as may be varied pursuant to a Special Use for Planned Unit Development.

The Special Use conforms to all existing Federal, State and local legislation and regulation. In addition, the Special Use exceeds the applicable Design Review Standards by incorporating substantial open space and natural features into the site plan to create an environment for the aesthetically pleasing architecture of the buildings. Particular attention has been paid to outdoor features such as bike/walking paths, picnic areas, ponds, water features and open space. Abundant landscaping will further enhance the natural environment. Buildings will be designed and constructed to Class A standards and will feature interesting and varied architecture with common design elements and harmonious materials and colors.

Finding of Fact Sheet – Special Use for a Planned Unit Development

- *The law requires that before the City can approve a Special Use for a Planned Unit Development, it must state "findings of fact" which show that the proposed Special Use for a Planned Unit Development will meet the following standards of the Zoning Code.*

- *As the Applicant, the "burden of proof" is on you to show how your proposed Special Use will comply with each of the following standards. Therefore, you need to "make your case" by explaining specifically how your project meets each of the following standards.*

Corporate Reserve Apartments **March 26, 2012**
Ordinance 2008-Z-18

From the St. Charles Zoning Ordinance, Section 17.04.410.3:
The Plan Commission shall not favorably recommend, and the City Council shall not approve, a Special Use for a PUD or an amendment to a Special Use for a PUD unless they each make findings of fact based on the application and the evidence presented at the public hearing that the PUD is in the public interest, based on the following criteria:

i. The proposed PUD advances one or more of the purposes of the Planned Unit Development procedure stated in Section 17.04.400A:

1. To promote a creative approach to site improvements and building design that result in a distinctive, attractive development that has a strong sense of place, yet becomes an integral part of the community.

The proposed PUD will create a housing type not currently provided in the residential housing stock. The proposed luxury rental community will feature abundant modern amenities that provide entertainment, social, recreational and physical fitness opportunities to the residents of the complex. The architecture and site plan create a community feel for the project while ample biking and walking paths will provide connectivity to The Great Western Trail and the adjacent LeRoy Oaks forest preserve. The location on Main Street, proximate to the growing Randall Road corridor, makes the PUD and the use appropriate for this site.

2. To create places oriented to the pedestrian that promote physical activity and social interaction, including but not limited to walkable neighborhoods, usable open space and recreational facilities for the enjoyment of all.

Sidewalks and bike paths located throughout the property provide great opportunities to the residents to be physically active outdoors on the site. Further, the property is directly connected to The Great Western Trail which is part of a tremendous regional recreation network. The clubhouse will include an indoor fitness center with numerous pieces of exercise equipment and a

social room with televisions and internet access. There will be an outdoor pool and social gathering area adjacent to the clubhouse. The site will also include "pocket parks" and open greenspace scattered throughout the property.

3. To encourage a harmonious mix of land uses and a variety of housing types and prices.

The proposed multifamily use is consistent with surrounding multifamily residential properties to the east, west and south of the subject. The proposed development will offer renters an array of modern amenities not currently available in the growing and dynamic west side.

4. To preserve native vegetation, topographic and geological features, and environmentally sensitive areas.

The PUD incorporates the potential sensitive wetlands and their buffer areas as undisturbed open space. This will allow these areas to continue to benefit the natural environment. The site plan follows the current sloping topography with grading to satisfy engineering requirements.

5. To promote the economical development and efficient use of land, utilities, street improvements, drainage facilities, structures and other facilities.

The proposed development will utilize infrastructure improvements that were completed in previous phases of The Corporate Reserve in anticipation of construction on this site. Further, the development will provide construction jobs and ongoing property operation positions and will contribute to the tax base of the community.

6. To encourage redevelopment of sites containing obsolete or inappropriate buildings or uses.

The proposed improvements will replace the obsolete industrial building which was demolished in a previous phase of this project. The proposed multifamily use is more consistent with the adjacent uses than the previous manufacturing/industrial building that formerly occupied the site.

7. To encourage a collaborative process among developers, neighboring property owners and residents, governmental bodies and the community.

The proposed site plan is the result of numerous meetings with the City, public hearings with governmental leaders and meetings with surrounding property owners. This iterative process has incorporated the feedback from all stakeholders associated with the PUD.

ii. The proposed PUD and PUD Preliminary Plans conform to the requirements of the underlying zoning district or districts in which the PUD is located and to the applicable Design Review Standards contained in Chapter 17.06 except where:

A. Conforming to the requirements would inhibit creative design that serves community goals, or
B. Conforming to the requirements would be impractical and the proposed PUD will provide benefits that outweigh those that would have been realized by conforming to the applicable requirements.

Factors listed in Section 17.04.400.B shall be used to justify the relief from requirements:

1. The PUD will provide community amenities beyond those required by ordinance, such as recreational facilities, public plazas, gardens, public area, pedestrian and transit facilities.
2. The PUD will preserve open space, natural beauty and critical environmental areas in excess of what is required by ordinance or other regulation.
3. The PUD will provide superior landscaping, buffering or screening.
4. The buildings within the PUD offer high quality architectural design.
5. The PUD provides for energy efficient building and site design.
6. The PUD provides for the use of innovative stormwater management techniques.
7. The PUD provides accessible dwelling units in numbers or features beyond what is required by the Americans with Disabilities Act (ADA) or other applicable codes.
8. The PUD provides affordable dwelling units in conformance with, or in excess of, City policies and ordinances.
9. The PUD preserves historic buildings, sites or neighborhoods.

Three variances to the proposed RM-3 residential are being requested. The first relates to interior side yard and rear yard setbacks. The buildings located adjacent to neighboring properties all conform to the setback requirements of the underlying zoning. There are a few incidents where building internal to the site do not conform. The rear yards on the north buildings are smaller due to the legal subdivision of the stormwater pond that is being done to facilitate transfer of the pond to the existing property owner association that owns all of the stormwater facilities. Also, an interior side yard setback is smaller than required where the buildings are angled in order to maximize the park/greenspace.

A second variance relates to building height of buildings of 47 feet 6 inches versus the RM-3 maximum of 45 feet. The additional height allows for a roof pitch that is harmonious with the architecture of the buildings. This was done for aesthetic reasons.

A third variance relates to the landscape requirement for trees around the buildings. The eight driveways that occupy a portion of one of the sides of the building limit the ability to plant trees in these areas. To address this deficiency, we have designed more than the required number of trees throughout the site so that while the requirement for individual buildings may not meet the code, the overall site exceeds the code.

iii. The proposed PUD conforms with the standards applicable to Special Uses (section 17.04.330.C.2).

Submit responses on form: "Findings of Fact Sheet – Special Use"

iv. The proposed PUD will be beneficial to the physical development, diversity, tax base and economic well-being of the City.

The proposed PUD will be beneficial to the physical development of St. Charles by creating a high quality luxury apartment community offering abundant open space, superior architectural design and modern amenities not currently available in the market. This development will contribute to the housing stock of the City by offering prospective residents a high quality rental product on the growing west side. Fundamental shifts in the housing market in St. Charles and the United States have created unsatisfied demand for modern, class A apartments.

The real estate taxes immediately generated by the proposed multifamily development will greatly exceed those that would otherwise be generated by the protracted development of the site as office use. Initial projections of the full buildout of the property as office space have been greatly extended by the economic realities of the last 4 years. This project offers economic activity on a site that would otherwise likely stay vacant for years to come. In addition, the City will benefit from increased daytime and nighttime population and the attendant spending at local restaurants and businesses.

v. The proposed PUD conforms to the intent of the Comprehensive Plan.

The property is designated as Business Enterprise in the current St. Charles Comprehensive Plan. The proposed underlying zoning of RM-3 is consistent with adjacent land uses.

CITY OF ST. CHARLES

Two East Main Street
St. Charles, Illinois, 60174-1984
Community Development/Planning Division Phone: (630) 377-4443 Fax: (630) 377-4062

PUD Preliminary Plan Application

Cityview Project No.: 2007PR004
Cityview Application No.: 2012AP006
Project Name: Corporate Reserve Apartments

Instructions:

To request approval of a PUD Preliminary Plan, complete this application and submit it with all required plans and attachments to the Planning Division. Normally this application will track with an application for a Special Use for a PUD, unless a Special Use for a PUD has previously been granted and no amendment is necessary.

When the application is complete staff will distribute the plans to other City departments for review. When the staff has determined that the plans are ready for Plan Commission review, we will place the PUD Preliminary Plan on a Plan Commission meeting agenda..

The information you provide must be complete and accurate. If you have a question please call the Planning Division and we will be happy to assist you.

1. Property Information:	Parcel Number(s): 09-29-326-001	
	Street Address (or common location if no address is assigned) North side of Woodward Drive at Corporate Reserve Boulevard	

2. Applicant Information:	Name: Corporate Reserve Development, LLC	Phone: 847-348-7800
	Address: 1930 N. Thoreau Drive, Suite 175 Schaumburg, IL 60173	Fax: 847-348-7801
		Email: p-robertson@jcfre.com

3. Record Owner Information:	Name: St. Charles Fairgrounds Office Park Investors, LLC	Phone: 847-348-7800
	Address: 1930 N. Thoreau Drive, Suite 175 Schaumburg, IL 60173	Fax: 847-348-7801
		Email: p-robertson@jcfre.com

4. Billing: *To whom should*	Name: Corporate Reserve Development, LLC	Phone: 847-348-7800

costs for this application be billed?	Address: 1930 N. Thoreau Drive, Suite 175 Schaumburg, IL60173	Fax: 847-348-7801
		Email: p-robertson@jcfre.com

Attachment Checklist

Note: The City Staff, Plan Commission, or City Council, may request other pertinent information during the review process.

☑ **Application:** Completed application form signed by the applicant

☑ **Application Fee:** Application fee in accordance with Appendix B of the Zoning Ordinance.

☑ **Reimbursement of Fees Agreement:**
An original, executed Reimbursement of Fees Agreement and deposit of funds with the City, as provided by Exhibit B of the Zoning Ordinance.

☑ **Proof of Ownership and Disclosure:**

1. A current title policy report; or
2. A deed and a current title search.

If the owner is not the applicant, an original letter of authorization from the owner permitting the applicant to act on his/her behalf is required. If the owner or applicant is a Trust, a disclosure of all beneficiaries; if the owner or applicant is a partnership, a disclosure of all partners; if the owner or applicant is a Corporation, a disclosure of all owners with an interest of at least ten percent (10%).

☑ **Legal Description:** For entire subject property, on 8 ½ x 11 inch paper.

☑ **Plat of Survey:**

A current plat of survey for the Subject Realty showing all existing improvements on the property, prepared by an Illinois Registered Land Surveyor.

☑ **Soil and Water Conservation District Application:**

Copy of completed Land Use Opinion application as required by state law, as submitted to The Kane-Dupage Soil and Water Conservation District. http://www.kanedupageswcd.org/

☑ **Endangered Species Assessment:**

Copy of the Endangered Species Consultation Agency Action to be filed with the Illinois Department of Natural resources. http://dnecocat.state.il.us/ecopublic/

☑ **Plans:**

All required plans shall be drawn on sheets no larger than 24" x 36", unless the Director of Community Development permits a larger size when necessary to show a more comprehensive

view of the project. All required plans shall show north arrow and scale, and shall be drawn at the same scale (except that different scale may be used to show details or specific features). All plans shall include the name of the project, developer or owner of the site, person or firm preparing the plan, and the date of plan preparation and all revisions.

Initial submittal for staff review shall be eight (8) full size sets of plans, one 11" x 17" reduction and a pdf file. Submittal for Plan Commission review shall be twenty-four (24) full size sets of plans, one 11" x 17" reduction and a pdf document file. Twenty-four (24) copies of all sheets printed in color shall be required, regardless of their size.

☑ **Site/Engineering Plan:**

A plan or plans showing the following information:

1. Accurate boundary lines with dimensions
2. Existing and proposed easements: location, width, purpose
3. Streets on and adjacent to the tract: Name and right-of-way width, center line elevation, and culverts
4. Location, size, shape, height, and use of existing and proposed structures
5. Location and description of streets, sidewalks, and fences
6. Surrounding land uses
7. Legal and common description
8. Date, north point, and scale
9. Existing and proposed topography
10. All parcels of land intended to be dedicated for public use or reserved for the use of all property owners with the proposal indicated
11. Location of utilities
12. Building/Use setback lines
13. Location of any significant natural features
14. Location of any 100-year recurrence interval floodplain and floodway boundaries
15. Location and classification of wetland areas as delineated in the National Wetlands Inventory
16. Existing zoning classification of property
17. Existing and proposed land use
18. Area of property in square feet and acres
19. Proposed off-street parking and loading areas
20. Number of parking spaces provided and number required by ordinance
21. Angle of parking spaces
22. Parking space dimensions and aisle widths
23. Driveway radii at the street curb line
24. Width of driveways at sidewalk and street curb line
25. Provision of handicapped parking spaces
26. Dimensions of handicapped parking spaces
27. Depressed ramps available to handicapped parking spaces
28. Location, dimensions and elevations of freestanding signs
29. Location and elevation of trash enclosures
30. Provision for required screening, if applicable
31. Provision for required public sidewalks
32. Certification of site plan by a registered land surveyor or professional engineer
33. Geometric plan showing all necessary geometric data required for accurate layout of the site
34. Grading plans showing paving design, all storm sewers, and detention/retention facilities (including detention/retention calculations) and erosion control measures

35. Utility plans showing all storm sewers, sanitary sewers, watermains, and appropriate appurtenant structures
36. Exterior lighting plans showing:
    Location, height, intensity and fixture type of all proposed exterior lighting
    Photometric information pertaining to locations of proposed lighting fixtures
37. Typical construction details and specifications
38. Certification of site engineering plans by a registered professional engineer
39. Proof of application of Stormwater Management Permit

☑ **Sketch Plan for Later Phases of PUD:**

For phased PUD's, where a sketch plan is permitted, it shall include, at minimum, the following:

1. General location of arterial and collector street
2. Location of any required landscape buffers
3. Location of proposed access to the site from public streets
4. Maximum number of square feet of floor area for nonresidential development
5. Maximum number of dwelling units for residential development
6. Open space and storm water management land

☑ **Architectural Plans:**

Architectural plans and data for all principal buildings shall be submitted in sufficient detail to permit an understanding of the exterior appearance and architectural style of the proposed buildings, the number, size and type of dwelling units, the proposed uses of nonresidential and mixed use buildings, total floor area and total building coverage of each building.

☑ **Tree Preservation Plan:**

Tree Preservation Plan when required in accordance with Chapter 8.30 of the St. Charles Municipal Code. The information required for this plan may be included as part of the Landscape Plan set.

☑ **Landscape Plan:**

Landscape Plan showing the following information:

- Delineation of the buildings, structures, and paved surfaces situated on the site and/or contemplated to be built thereon
- Delineation of all areas to be graded and limits of land disturbance, including proposed contours as shown on the Site/Engineering Plan
- Accurate property boundary lines
- Accurate location of proposed structures and other improvements, including paved areas, berms, lights, retention and detention areas, and landscaping
- Site area proposed to be landscaped in square feet and as a percentage of the total site area
- Percent of landscaped area provided as per code requirements
- Dimensions of landscape islands
- Setbacks of proposed impervious surfaces from property lines, street rights-of-way, and private drives
- Location and identification of all planting beds and plant materials

- Planting list including species of all plants, installation size (caliper, height, or spread as appropriate) and quantity of plant species
- Landscaping of ground signs and screening of dumpsters and other equipment

☑ **Public Benefits, Departures From Code:**

A description of how the PUD meets the purposes and requirements set out in Section 17.04.400 of the Zoning Ordinance. Any requests for departures from the requirements of Title 16, "Subdivisions and Land Improvement," and Title 17, "Zoning," shall be listed and reasons for requesting each departure shall be given.

Three variances to the proposed RM-3 residential are being requested. The first relates to interior side yard and rear yard setbacks. The buildings located adjacent to neighboring properties all conform to the setback requirements of the underlying zoning. There are a few incidents where building internal to the site do not conform. The rear yards on the north buildings are smaller due to the legal subdivision of the stormwater pond that is being done to facilitate transfer of the pond to the existing property owner association that owns all of the stormwater facilities. Also, an interior side yard setback is smaller than required where the buildings are angled in order to maximize the park/greenspace.

A second variance relates to building height of buildings of 47 feet 6 inches versus the RM-3 maximum of 45 feet. The additional height allows for a roof pitch that is harmonious with the architecture of the buildings. This was done for aesthetic reasons.

A third variance relates to the landscape requirement for trees around the buildings. The eight driveways that occupy a portion of one of the sides of the building limit the ability to plant trees in these areas. To address this deficiency, we have designed more than the required number of trees throughout the site so that while the requirement for individual buildings may not meet the code, the overall site exceeds the code.

☑ **Schedule:** Construction schedule indicating:

a. Phases in which the project will be built with emphasis on area, density, use and public facilities, such as open space, to be developed with each phase. Overall design of each phase shall be shown on the plat and through supporting material.

   The site is currently mass graded so sitework/underground improvements can begin upon approval of final engineering drawings. Vertical construction will begin with the clubhouse and the three buildings to the north of the clubhouse. Construction will proceed in a general north-to-south direction, building from the rear of the site toward the front.

b. Approximate dates for beginning and completion of each phase.

   Construction will begin immediately upon receipt of zoning and engineering approval. Assuming three months to secure zoning approval, we would begin sitework improvements on July 1 and vertical improvements October 1. Vertical construction will begin with the clubhouse and three apartment buildings and will continue with each apartment building in sequence. Total construction scheduled to take 24 to 30 months.

c. If different land use types are to be included within the PUD, the schedule must include the mix of uses to be built in each phase.

☑ **Inclusionary Housing Summary**: For residential developments, submit information describing how the development will comply with the requirements of Chapter 17.18, Inclusionary Housing, including:

- The number and rental/for sale status of Market-Rate Units and Affordable Units to be constructed including type of dwelling, number of bedrooms per unit, proposed pricing, and construction schedule, including anticipated timing of issuance of building permits and occupancy certificates.
- Documentation and plans regarding locations of Affordable units and Market-Rate units, and their exterior appearance, materials, and finishes.
- A description of the marketing plan that the Applicant proposes to utilize and implement to promote sale or rental of the Affordable Units within the development; and,
- Any proposal to pay fees in lieu of providing the required Affordable Unit, per section 17.18.050.

Based on feedback obtained from neighboring property owners and elected officials during the Concept Plan review process, we will not be complying with the Inclusionary Housing Ordinance.

☑ **Subdivision Preliminary Plan Checklist:**

If the PUD Preliminary Plan involves the subdivision of land, a completed Subdivision Preliminary Plan Checklist must be submitted. The Subdivision Checklist may reference may reference the same set(s) of plans as the preceding checklists for Site/Engineering , Sketch Plan, Tree Preservation, and Landscape Plans, but the additional information required by the Subdivision Preliminary Plan Checklist must be included, where applicable.

☑ **Application for a Special Use for a PUD:**

This application for a PUD Preliminary Plan must be accompanies by an application for a Special Use for a PUD, unless the Special Use was previously granted and no amendment is needed. Documentation required for both applications need not be duplicated.

☑ **Historic Designation:** Is the property a designated Landmark or in a Historic District? No

I (we) certify that this application and the documents submitted are true and correct to the best of my (our) knowledge and belief.

Record Owner _____ Date 03/26/12

Applicant or Authorized Agent _____ Date 03/26/12

LEGAL DESCRIPTION

LOT 8 IN THE CORPORATE RESERVE OF ST. CHARLES, BEING A SUBDIVISION OF PART OF THE SOUTHWEST QUARTER AND THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 40 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED JANUARY 28, 2009 AS DOCUMENT NO. 2009K005931, ALL IN KANE COUNTY, ILLINOIS.

RESIDENTIAL ZONING COMPLIANCE TABLE

Name of Development: RIM - 3 Underlying zoning

	Zoning District Requirement	Existing PUD Requirement (if applicable)	Proposed
	District:	**Ordinance #:**	
Minimum Lot Area	2,200 SF/Unit		2,671 SF/Unit
Minimum Lot Width	65'		749' (overall parcel width)
Maximum Building Coverage	45%		21%
Maximum Building Height	45' (to ridge)		47' 6" (3 story) 56' (4 story walkout)
Minimum Front Yard	30'		30'
Interior Side Yard	25'		22' (44' bldg - bldg)
Exterior Side Yard	30'		30' 10' to detention lot
Minimum Rear Yard	30'		
Yards Adjoining Major Arterials [1]	NA		NA
% Overall Landscape Area	NA		
Building Foundation Landscaping	NA		
Landscape Buffer Yards [2]	NA		
# of Parking Spaces	476		526 (1-6:1)

1- For purpose of this Section, Major Arterials Include Randall Road, Main Street East of Tyler Road, and Kirk Road

2- Within the zoning districts specified, a Landscape Buffer Yard shall be provided along any lot line that abuts or is across a street from property in any RE, RS, or RT District. See Chapter 17.26 for planting and screening requirements for Landscape Buffers.

SUMMARY OF PROPOSED DEVELOPMENT

Name of Development	Corporate Reserve Apartments
Number of years expected for build out	2-3 years

Acreage or Square Ft. Breakdown:

Area of residential development	20.24
Area of nonresidential development	0
Area of private open space	0
Area of stormwater ponds/basins	2.39
Park land dedication	0
School land dedication	0
Total Acres	22.63

Residential Breakdown:

	Number of units
Single Family Detached:	0
Attached Single Family (Townhomes):	0
Multi-Family:	331
Other:	0
Total Dwelling Units	331
Gross Density (Total D.U./Total Residential Acres)	16.35
Estimated Total Population (from Park Worksheet)	598
Estimated Student Population (from School Worksheet)	27.6

City of St. Charles Land/Cash Worksheet

Dwelling Type/Bedroom Count		# of Units	Park	Est. Park Pop.	Elem.	Est. Pop.	Middle School	Est. Pop.	High School	Est. Pop.
Detached Single Family										
	3 bedroom	0	2.899	0	0.369	0	0.173	0	0.184	0
	4 bedroom	0	3.764	0	0.53	0	0.298	0	0.36	0
	5 bedroom	0	3.77	0	0.345	0	0.248	0	0.3	0
Attached Single Family (Townhomes)										
	1 bedroom	0	1.193	0	0	0	0	0	0	0
	2 bedroom	0	1.99	0	0.088	0	0.048	0	0.038	0
	3 bedroom	0	2.392	0	0.234	0	0.058	0	0.059	0
	4 bedroom	0	3.145	0	0.322	0	0.154	0	0.173	0
Multi Family (Condo/Apartment)										
	Efficiency	16	1.294	20.704	0	0	0	0	0	0
	1 bedroom	160	1.758	281.28	0.002	0.32	0.001	0.16	0.001	0.16
	2 bedroom	155	1.914	296.67	0.086	13.33	0.042	6.51	0.046	7.13
	3 bedroom	0	3.053	0	0.234	0	0.123	0	0.118	0
Estimated Population		**331**		**598.654**		**13.65**		**6.67**		**7.29**
							27.61			
Park Acreage @ 10 acres per 1,000 population				**5.98654**	**acres**					
Park Land Dedication				**0**	**acres**					
Park Cash in Lieu @ $240,500 per acre				**$1,439,762.87**						
Elementary School Acreage @.025 acres per student						0.34125				
Middle School Acreage @ .0389 acres per student								0.259463		
High School Acreage @ .072 acres per student										0.52488
Total School Acreage				**1.125593**						
Total School Cash in Lieu @ $240,500 per acre				**$270,705.12**						

1 1/2 Mile Jurisdiction Park Cash in Lieu	**$1,047,644.50**	(Not for development within City of St. Charles)
1 1/2 Mile Jurisdiction School Cash in Lieu	**$196,978.78**	(Not for development within City of St. Charles)

Inclusionary Housing
Paul Robertson
to:
morourke
06/01/2012 11:39 AM
Hide Details
From: Paul Robertson <p-robertson@jcfre.com>

To: <morourke@stcharlesil.gov>

In response to the recommendations we received during the concept plan review, we propose to have no income-restricted units in the development. We are, however, willing to make a $50,000 contribution to the housing authority in lieu of compliance with the ordinance. The project's feasibility is challenged by the impact fees requested by KDOT, the school district, the park district and the inclusionary housing ordinance, particularly in light of the uncertain economic environment and tenuous banking climate.

We are very optimistic about the success of the proposed apartment development and look forward to working through the zoning change with you. Please let me know if you have any questions about this exciting addition to the St. Charles housing stock.

Thank you.

Paul Robertson
Executive Vice President
JCF Real Estate
1930 North Thoreau Drive, Suite 175
Schaumburg, IL 60173
p 847.348.7800 x21
f 847.348.7801
c 847-899-5013

SITE DATA

Total Site Bedroom Count	Total # Units	Total Unit %	Total Parking Req.		Total Parking Provided	
STUDIO	16	4.8%	1.2/du	20	Surface	406
1 BR	160	48.4%	1.2/du	192	Garage	120
2 BR	155	46.8%	1.7/du	264	Total	526 (1.6:1)
Tot. Rental Units	331	100.0%		476		
Rental Site Lot Area/Unit	20.30 Ac. 2,671 SF/Unit					

North

Scale: 1" = 60'

0 60 120 240

JCF REAL ESTATE

The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e., applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)

Sheet LP-1

Corporate Reserve of St. Charles

Concept Site Plan

Date: May 14, 2012

BSB DESIGN

Front Elevation

scale: 3/16" = 1'-0"

JCF REAL ESTATE

Building 1

The Corporate Reserve of St. Charles

St. Charles, Illinois

BSB DESIGN

05-16-2012

Right Side Elevation
scale: 3/16" = 1'-0"

Left Side Elevation
scale: 3/16" = 1'-0"

JCF REAL ESTATE

Building 1

The Corporate Reserve of St. Charles
St. Charles, Illinois

BSB DESIGN

05-16-2012

Rear Elevation

scale: 3/16" = 1'-0"

JCF REAL ESTATE

Building 1

The Corporate Reserve of St. Charles

St. Charles, Illinois

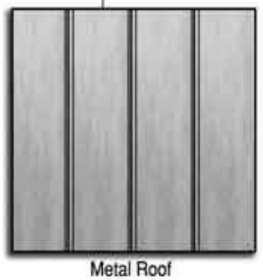
05-16-2012

BSB DESIGN

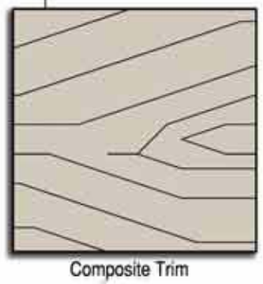
Front Elevation

scale: 3/16" = 1'-0"

Composite Siding / Board

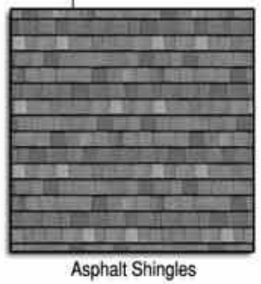


Metal Roof



Composite Trim

Cast Stone Veneer



Asphalt Shingles

Cast Stone Cap

JCF REAL ESTATE

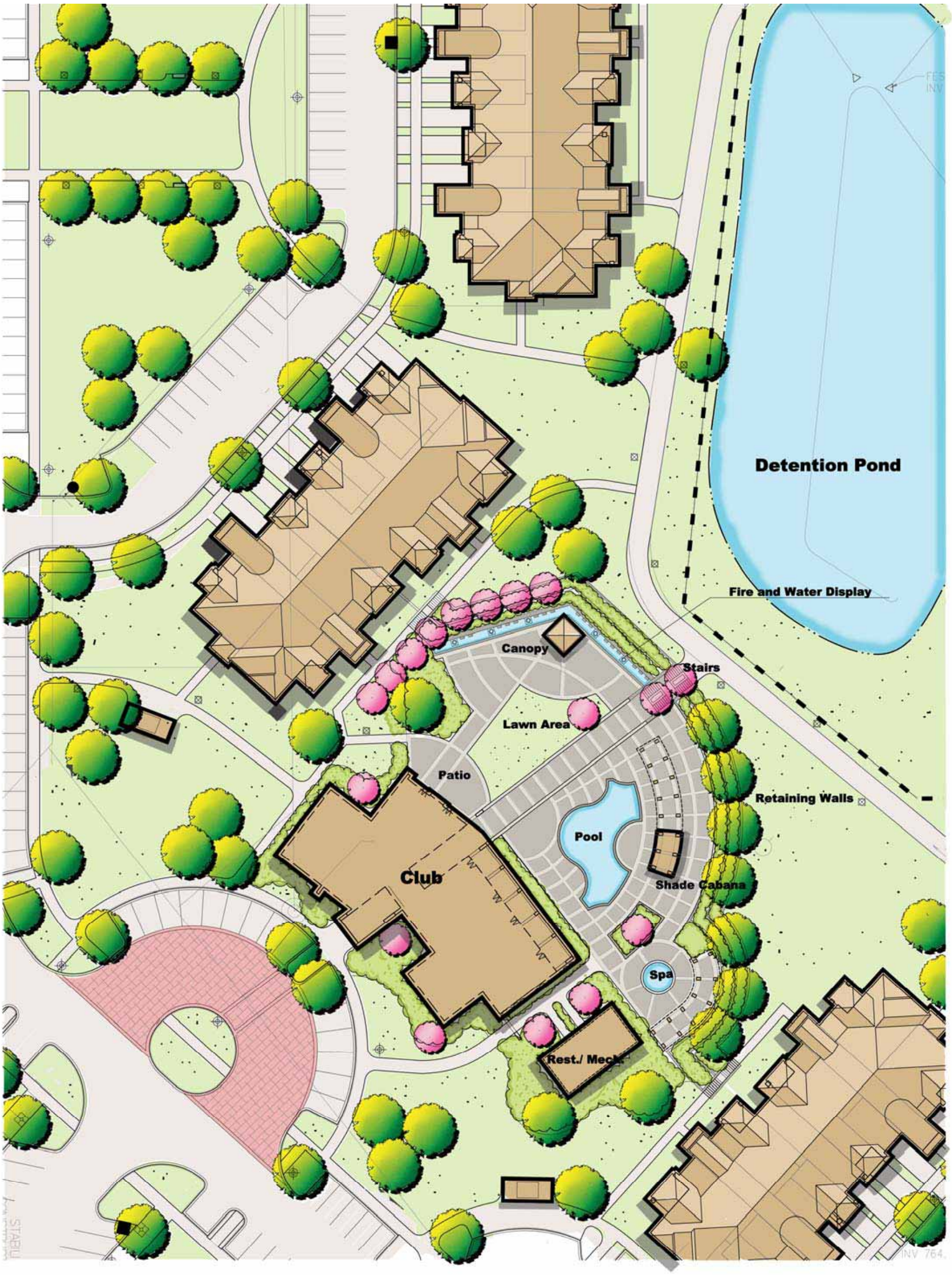
Materials Sample Board: Building 1

The Corporate Reserve of St. Charles

St. Charles, Illinois

05-16-2012

BSB DESIGN



North

Scale: 1" = 20'

0 20 40 80

Club Area

Corporate Reserve of St. Charles

Concept Plan

JCF REAL ESTATE

bsbdesign.com

The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)

Date: May 14, 2012

BSB DESIGN

Front Elevation

Left Side Elevation

Right Side Elevation

Rear Elevation

JCF REAL ESTATE

Clubhouse - 5790 GSF

The Corporate Reserve of St. Charles

St. Charles, Illinois

BSB DESIGN

05-16-2012

JCF REAL ESTATE

Clubhouse - 5790 GSF

The Corporate Reserve of St. Charles

St. Charles, Illinois

BSB DESIGN

05-16-2012

LANDSCAPE CALCULATIONS

OVERALL SITE: 862,488 SF
IMPERMEABLE SURFACES: 510,415 SF (59%)
GREENSPACE: 352,073 SF (41%)
OVERALL TREES PROVIDED: 459

PARKING LOT (shaded area=islands)
TOTAL AREA: 270,011 SF
TOTAL GREENSPACE REQUIRED (10%): 27,001 SF
TOTAL GREENSPACE PROVIDED: 50,000 SF
TOTAL TREES REQUIRED: 168
TOTAL TREES PROVIDED: 112
TOTAL SHRUBS/PERENNIALS PROVIDED: 3,033

APARTMENT FOUNDATIONS
TOTAL FOUNDATION: 9,517 LF
TOTAL TREES REQUIRED: 381
TOTAL TREES PROVIDED: 242
TOTAL SHRUBS/PERENNIALS REQUIRED: 3,807
TOTAL SHRUBS/PERENNIALS PROVIDED: 6,008

CLUBHOUSE FOUNDATION
FOUNDATION: 472 LF
TREES REQUIRED: 19
TREES PROVIDED: 39
TOTAL SHRUBS/PERENNIALS REQUIRED: 184
TOTAL SHRUBS/PERENNIALS PROVIDED: 872

EXISTING STORMWATER DETENTION BASIN

HALF WALK-OUT 13B
12 TREES
327 SH/PR

WALK-OUT 11B
19 TREES
554 SH/PR

HALF WALK-OUT 12B
TREES
327 SH/PR

WALK-OUT 10B
25 TREES
366 SH/PR

CLUB
39 TREES

14A
15 TREES
333 SH/PR

15A
12 TREES
382 SH/PR

1A
17 TREES
421 SH/PR

MAINTENANCE

DRIVE

WOODWARD

2A
18 TREES
425 SH/PR

FUTURE DEVELOPMENT

CORPORATE RESERVE BOULEVARD

3A
13 TREES
394 SH/PR

CHICAGO AND NORTHWESTERN RAILROAD

DETENTION

EXISTING STORMWATER DETENTION BASIN

WALK-OUT 9B
22 TREES
357 SH/PR

7B
TREES
326 SH/PR

5B
13 TREES
378 SH/PR

4B
15 TREES
385 SH/PR

SPLIT 8A
14 TREES
535 SH/PR

PARK

SPLIT 6A
19 TREES
632 SH/PR

EXISTING STORMWATER DETENTION BASIN

L-1 L-2 L-3 L-4 L-5 L-6 L-7 L-8 L-9

Kinsella Landscape, Inc.
Design/Contracting/Consulting/Maintenance
Phone: 708-371-4830
Fax: 708-371-9576

CORPORATE RESERVE OF ST CHARLES

REVISIONS

Date	Remarks
2011.05.03	DRT meeting
2011.05.16	PC meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER GK
CLIENT 12101

NORTH

SCALE: 1:50

PLANT LEGEND

- EVERGREEN TREE
- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- SMALL DECIDUOUS SHRUB
- PERENNIALS
- PERENNIALS - DAYLILY
- ORNAMENTAL GRASSES
- TRANSITIONAL BUFFER SEED MIX
- DETENTION SEED MIX

CHICAGO AND NORTHWESTERN RAILRO

EXISTING DETENTION BASIN

DETENTION

(3) CRA

(1) ACF
(5) ARO
(3) AML
(13) RCA

(2) CEL
(6) ARO
(8) RCA

(2) AML
(1) ACE
(7) RCA

DETENTION SEED MIX

(2) CEL
(6) ARO
(8) RCA

(1) ACE
(3) RCA
(6) ARO
(2) AML

(3) CRA

(5) RCA
(1) ACE
(6) ARO
(2) AML

(2) AME
(6) RCA
(1) CEL

DETENTION SEED MIX

(7) ARO
(1) AML
(2) GYM

(6) RCA
(1) GYM
(3) PIC

(3) AME

(4) PIC

LAWN

MATCHLINE L-2
MATCHLINE L-4

MATCHLINE L-2
MATCHLINE L-3

MATCHLINE L-2
MATCHLINE L-3

Kinsella Landscape, Inc.
Design/Construction/Maintenance
Phone: 708-371-0830
Fax: 708-371-9576

CORPORATE RESERVE
OF ST. CHARLES

REVISIONS
2011.05.03 DRT meeting
2011.05.16 PC meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER GK
CLIENT 12101

NORTH

SCALE: 1:20

L-2

PLANT LEGEND

- EVERGREEN TREE
- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- SMALL DECIDUOUS SHRUB
- PERENNIALS
- PERENNIALS - DAYLILY
- ORNAMENTAL GRASSES
- TRANSITIONAL BUFFER SEED MIX
- DETENTION SEED MIX

MATCHLINE L-2
MATCHLINE L-3
MATCHLINE L-1
MATCHLINE L-5

(9) RNO
(10) PHY
(4) TAX
(1) ACE
(4) NEP
(13) HEM
(6) HYD
(8) NEP
(18) HEM
(6) CLG
(17) AMS
(1) CRA
(13) HEM
(5) HEM
(5) NEP
(7) HYD
(17) HEM
(2) ACF
(3) ACE
(1) AMS
(7) CLG
(14) HYD
(10) AMS
(8) CLG
(6) TAX
(3) ARO
(4) TAX
(21) AMS
(6) CLG
(8) NEP
(6) ARO
(6) TAX
(6) SYR
(4) HYD
(8) SYR
(5) COR
(1) QUM
(4) SYR
(12) HEM
(10) CLM
(1) AME
(10) SPI
(4) TAX
(12) SAL
(8) HEM
(2) CEL
(6) RNO
(5) MIS
(6) RNO
(17) CLM
(2) TIL
WALK-OUT 9B
(8) HEM
(2) CLG
(7) HEM
(3) CLG
(5) TAX
(6) MIS
(1) AME
(7) HEM
(6) RNO
(1) QUB
(22) HEM
(36) HEM
(1) QUM
(9) RNO
(4) RNO
(6) CRA
(9) RNO
(1) QUB
(32) HEM
TRASH
(1) GLE
(3) PIC
(2) ACF
(22) AMS
(17) HEM
(4) TAX
(6) CLG
(5) NEP
(6) ARO
(7) HYD
(8) NEP
(6) TAX
(6) CLG
(16) AMS
(5) HEM
(17) AMS
(12) HEM
(1) CRA
(3) ARO
(6) TAX
(5) MIS
(1) AME
(7) HEM
(3) CLG
(8) HEM
WALK-OUT 10B
(2) CLG
(8) HEM
(8) TAX
(12) SAL
(11) SPI
(2) QUB
(12) HEM
(6) RNO
(5) MIS
(8) HEM
(17) CLM
(1) AME
(1) QUM
(6) SYR
(2) CRA
(14) HYD
(7) NEP
(18) HEM
(7) TAX
(6) CLG
(2) QUB
(1) QUM
(4) TAX
(11) AMS
(6) HYD
(4) NEP
(14) HEM
(7) CLG
(10) SYR
(4) HYD
(1) CEL
(5) SYR
(4) PHY
(2) CRA
(2) TIL
(3) PIC
MATCHLINE L-3
MATCHLINE L-5
TRASH

Kinsella Landscape, Inc.
Design/Construction/Maintenance
Phone: 708-371-0830
Fax: 708-371-9576

CORPORATE RESERVE
OF ST. CHARLES

REVISIONS
Date Drawn Remarks
2011.05.03 DRT meeting
2011.05.16 PC meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER SK
CLIENT 12101

NORTH

SCALE: 1:20

L-3

PLANT LEGEND

- EVERGREEN TREE
- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- SMALL DECIDUOUS SHRUB
- PERENNIALS
- PERENNIALS - DAYLILY
- ORNAMENTAL GRASSES
- TRANSITIONAL BUFFER SEED MIX
- DETENTION SEED MIX

MATCHLINE L-2
MATCHLINE L-3
MATCHLINE L-4
MATCHLINE L-5
MATCHLINE L-6
TRASH
SPLIT RAIL
DECORATIVE GRAVEL

Kinsella Landscape, Inc.
Design/Construction/Maintenance
Phone: 708-371-0830
Fax: 708-371-9576

CORPORATE RESERVE
OF ST. CHARLES

REVISIONS

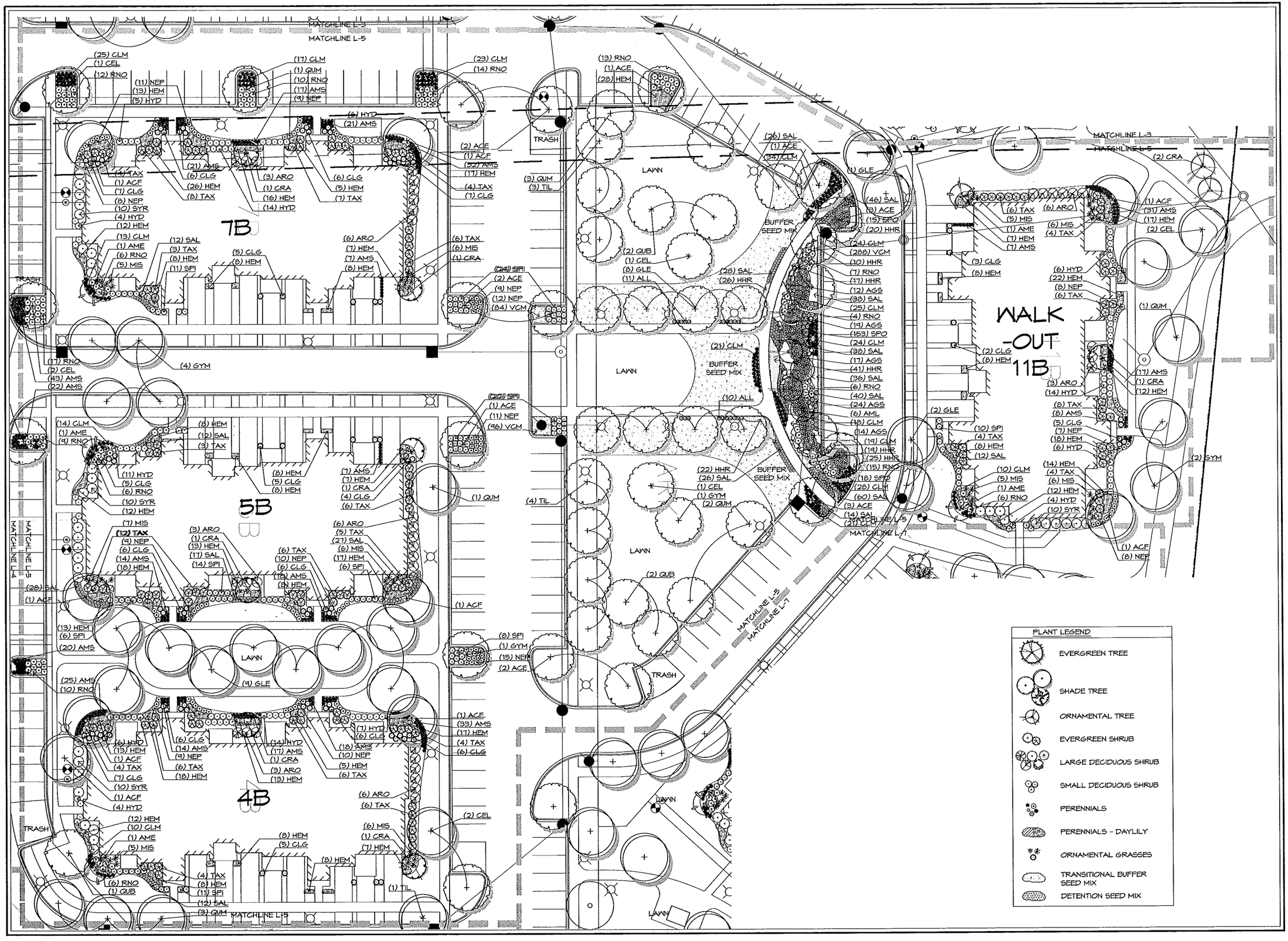
Date	Remarks
2011.05.03	DRT meeting
2011.05.16	PC meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER GK
CLIENT 12101

NORTH

SCALE: 1:20

L-4



PLANT LEGEND

- EVERGREEN TREE
- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- SMALL DECIDUOUS SHRUB
- PERENNIALS
- PERENNIALS - DAYLILY
- ORNAMENTAL GRASSES
- TRANSITIONAL BUFFER SEED MIX
- DETENTION SEED MIX

Kinsella Landscape, Inc.
Design/Construction/Maintenance
Phone: 708-371-0830
Fax: 708-371-9576

CORPORATE RESERVE OF ST. CHARLES

REVISIONS

Date	Drawn	Remarks
2011.05.03	DRT	meeting
2011.05.16	PC	meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER GK
CLIENT 12101

NORTH

SCALE: 1: 20

L-5

PLANT LEGEND

- EVERGREEN TREE
- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- SMALL DECIDUOUS SHRUB
- PERENNIALS
- PERENNIALS - DAYLILY
- ORNAMENTAL GRASSES
- TRANSITIONAL BUFFER SEED MIX
- DETENTION SEED MIX

MATCHLINE L-7
MATCHLINE L-6
MATCHLINE L-4
MATCHLINE L-6
MATCHLINE L-6
MATCHLINE L-8

TRASH
TRASH

(3) ACE
(20) NEP
(1) ACE
(14) SPI
(1) ACE
(4) CEL
(1) ACE
(2) ACE
(17) NEP
(1) QUM
(16) RNO
(5) HEM
(4) HYD
(5) CLG
(8) AMS
(1) AME
(6) TAX
(1) QUM
(8) CLG
(17) AMS
(5) TAX
(1) CRA
(12) HEM
(13) SAL
(3) TAX
(6) HYD
(3) MIS
(6) TAX
(2) TIL
(24) SAL
(20) HEM
(10) RNO
(2) ACE
(6) ARO
(7) JUN
(15) AGS
(1) ACE
(14) NEP
(14) RNO
(6) NEP
(3) ACE
(18) RNO
(1) CEL
(5) TAX
(19) HEM
(6) CLG
(4) ARO
(1) CRA
(28) AMS
(32) HEM
(11) RNO
(20) SAL
(9) CLM
(22) SAL
(4) CLG
(5) RNO
(6) SYR
(7) MIS
(7) AGS
(5) JUN
(7) RNO
(7) TAX
(12) HHR
(2) GYM
(10) SPO
(5) PHY
EXISTING TREE TO BE TRANSPLANTED
3A
3A

(6) TAX
(8) CLG
(1) AME
(5) HEM
(8) AMS
(5) ARO
(24) HEM
(1) AME
(7) MIS
(6) RNO
(26) HEM
(4) TAX
(4) HYD
(5) CLG
(5) RNO
(32) HEM
(28) AMS
(1) CRA
(4) ARO
2A
DECORATIVE STONE
(1) CRA
(5) TAX
(17) AMS
(12) HEM
(13) SAL
(3) TAX
(6) HYD
(13) SAL
(3) CLG
(6) TAX
(10) RNO
(25) HEM
(10) RNO
(1) GYM
(23) AGS
(2) PIC
(32) HEM
(18) HEM
(29) CLM
(18) MIS
(11) RNO
(12) RNO
(20) SAL
(9) CLM
(4) CLG
(7) TAX
(37) HEM
(7) MIS
(1) ACF
(15) AGS
(7) SYR
(10) GLE
(19) HEM
(3) AML
(51) SPO
(47) CLM
(4) TAX
(31) HEM
(1) ACF
(54) HEM
(38) CLM
(15) MIS
(23) SPO
(13) SPI
(31) HEM
(30) HEM
(12) SPI
(2) AME
(25) SPO
(10) NEP
(10) SPI
(1) QUB
(14) SPO
(1) QUB
(6) TAX
(5) MIS
(1) AME
(5) HEM
(8) AMS
(5) CLG
(13) ARO
(1) AME
(24) HEM
(9) CLG
(6) RNO
(13) SAL
(12) HEM
(14) SAL
(4) TAX
(5) RNO
(4) HYD
(32) HEM
(28) AMS
(1) CRA
(4) ARO
1A
(5) TAX
(1) CRA
(18) AMS
(6) RNO
(18) SAL
(4) CLG
(7) TAX
(1) ACE
(12) HEM
(3) TAX
(14) SAL
(6) HYD
(19) SAL
(3) MIS
(4) TAX
(9) SAL
(8) RNO
(8) MIS
(29) AGS
(4) ARO
(11) RNO
(1) QUB
(12) MIS
(25) AGS
(47) HEM
(18) CLM
(3) PIC
(10) RNO

Kinsella Landscape, Inc.
Design/Construction/Maintenance
Phone: 708-371-0830
Fax: 708-371-9576

CORPORATE RESERVE
OF ST. CHARLES

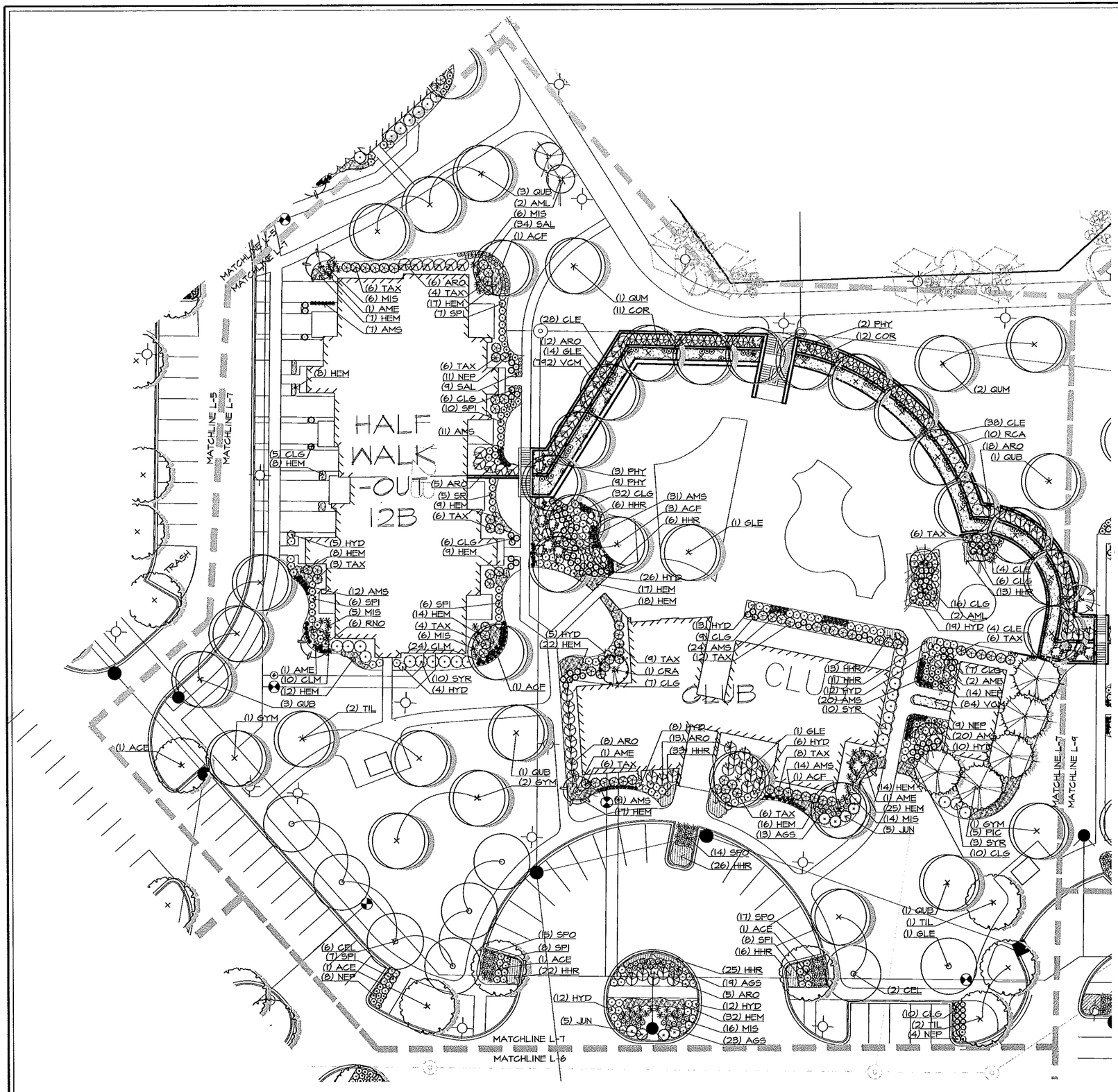
REVISIONS
Date Drawn Remarks
2011.05.03 DRT meeting
2011.05.16 PC meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER GK
CLIENT 12101

NORTH

SCALE: 1:20

L-6



PLANT LEGEND

- EVERGREEN TREE
- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- SMALL DECIDUOUS SHRUB
- PERENNIALS
- PERENNIALS - DAYLILY
- ORNAMENTAL GRASSES
- TRANSITIONAL BUFFER SEED MIX
- DETENTION SEED MIX

Kinsella Landscape, Inc.
Design/Construction/Maintenance
Phone: 708-371-4400
Fax: 708-371-9576

CORPORATE RESERVE OF ST. CHARLES

REVISIONS

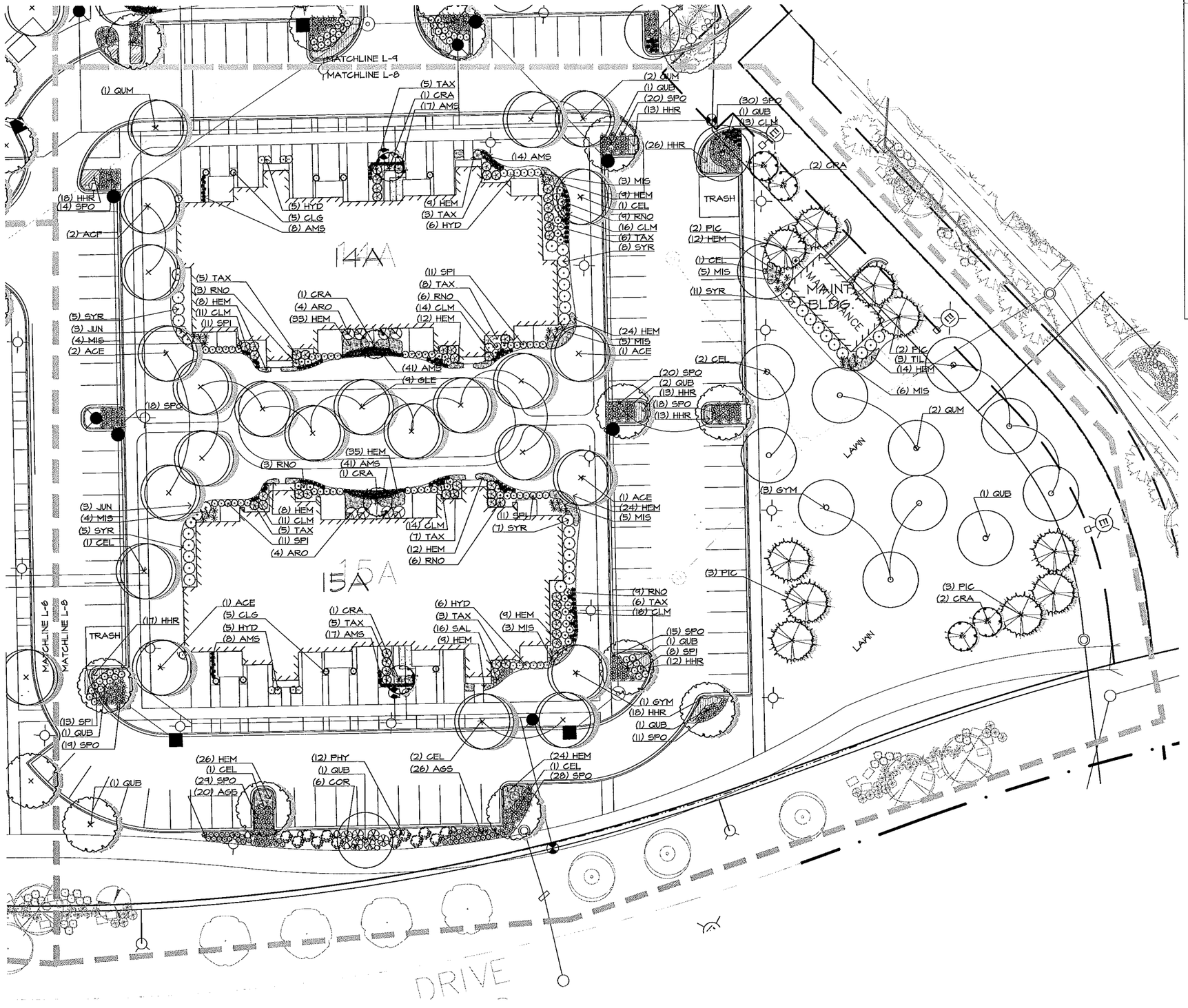
Date	Description
2011.05.03	DRT meeting
2011.05.16	PC meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER GK
CLIENT 12101

NORTH

SCALE: 1:20

L-7



PLANT LEGEND

- EVERGREEN TREE
- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- SMALL DECIDUOUS SHRUB
- PERENNIALS
- PERENNIALS - DAYLILY
- ORNAMENTAL GRASSES
- TRANSITIONAL BUFFER SEED MIX
- DETENTION SEED MIX

Kinsella Landscape, Inc.
Professional Landscape Design/Maintenance
Phone: 708-371-6830
Fax: 708-371-9576

CORPORATE RESERVE OF ST. CHARLES

REVISIONS

Date	Drawn	Remarks
2011.05.03		DRT meeting
2011.05.16		PC meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER GK
CLIENT 12101

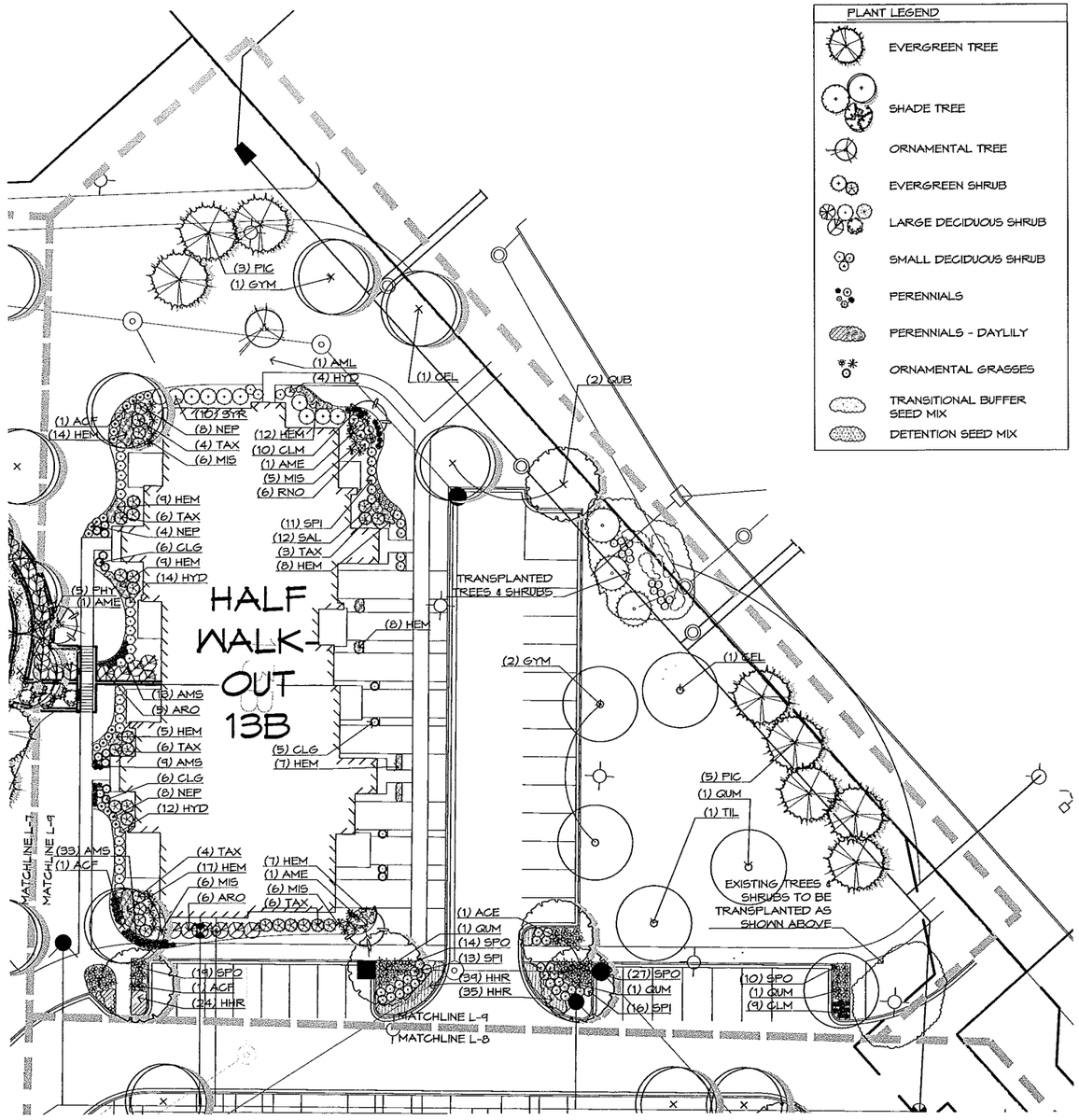
NORTH

SCALE: 1:20

L-8

PLANT LIST

ABBRV.	LATIN NAME	COMMON NAME	QUANTITY	SIZE & SHAPE	LOCATION
DECIDUOUS TREES (308 total)					
ACE	Acer x freemanii 'Marmo'	MARMO MAPLE	42	2.5"/CENTRAL LEADER	ALL
ACF	Acer x freemanii 'Armstrong'	ARMSTRONG MAPLE	35	2.5"/CENTRAL LEADER	ALL
CEL	Celtis occidentalis	HACKBERRY	43	2.5"/CENTRAL LEADER	ALL
GLE	Gleditsia triacanthos inermis	HONEYLOCUST	64	2.5"/CENTRAL LEADER	ALL
GYM	Gymnocladus dioica	KENTUCKY COFFEE TREE	28	2.5"/CENTRAL LEADER	ALL
QUB	Quercus bicolor	SWAMP WHITE OAK	36	2.5"/CENTRAL LEADER	ALL
QUM	Quercus macrocarpa	BUR OAK	34	2.5"/CENTRAL LEADER	ALL
TIL	Tilia americana	LINDEN	26	2.5"/CENTRAL LEADER	ALL
EVERGREEN TREES (45 total)					
PIG	Picea glauca densata	BLACK HILLS SPRUCE	45	8' B4B	ALL
ORNAMENTAL TREES (106 total)					
AME	Amelanchier x grandiflora 'Autumn Brilliance'	AUTUMN BRILLIANCE SERVICEBERRY	29	6'/CLUMP FORM	FOUNDATION
AML	Amelanchier laevis	ALLEGHENY SERVICEBERRY	31	6'/CLUMP FORM	SWALE, ALL
CRA	Crataegus viridis 'Winter King'	WINTER KING HAWTHORN	46	6'/CLUMP FORM	ALL
EVERGREEN SHRUBS					
JUN	Juniperus chinensis 'Kallay's Compact'	KALLAY'S COMPACT JUNIPER	41	5 GAL.	FOUNDATION
TAX	Taxus x media 'Densiformis'	DENSE YEW	492	24" B4B	FOUNDATION
DECIDUOUS SHRUBS					
ARO	Aronia arbutifolia 'Brilliantissima'	RED CHOKEBERRY	227	36" B4B	ALL
COR	Cornus 'Baileyi'	RED TWIG DOGWOOD	61	36" B4B	BERMS
HYD	Hydrangea macrophylla 'Balmer'	ENDLESS SUMMER HYDRANGEA	391	#5 CONT.	FOUNDATION
PHY	Physocarpus opulifolius 'Monolo'	DIABOLO NINEBARK	62	36" B4B	BERMS, DETENTION
RCA	Rosa carolina	CAROLINA ROSE	55	#5 CONT.	DETENTION
RNO	Rosa var. 'Noare'	FLOWER CARPET ROSE	486	#3 CONT.	FOUNDATION
SPI	Spiraea betulifolia 'Tor'	BIRCHLEAF SPIREA	415	#5 CONT.	ALL
SYR	Syringa meyer 'Palibin'	DWARF KOREAN LILAC	190	36" B4B	ALL
ORNAMENTAL GRASSES & PERENNIALS					
AGS	Agastache 'Blue Fortune'	BLUE FORTUNE AGASTACHE	343	1 GAL.	ALL
ALL	Allium 'Summer Beauty'	SUMMER BEAUTY ALLIUM	95	1 GAL.	
AMS	Amsonia x 'Blue Ice'	BLUE ICE BLUE STAR	1185	1 GAL.	ALL
CLG	Calamagrostis brachytricha	KOREAN FEATHER REED GRASS	474	1 GAL.	ALL
CLM	Calamintha nepeta spp. Nepeta	CALAMINTHA	887	1 GAL.	ALL
HEM	Daylily Mix:				
	Hemerocallis 'Fairy Tale Pink' (33%)	FAIRY TALE DAYLILY	819	1 GAL.	ALL
	+ Hemerocallis 'Mary Todd' (33%)	MARY TODD DAYLILY	819	1 GAL.	ALL
	+ Hemerocallis 'Prairie Blue Eyes' (33%)	PRAIRIE BLUE EYES DAYLILY	819	1 GAL.	ALL
HHR	Hemerocallis 'Happy Returns'	HAPPY RETURNS DAYLILY	630	1 GAL.	ALL
MIS	Miscanthus sinensis 'Gracillimus'	MAIDEN GRASS	296	1 GAL.	BERMS/PARKING ISLANDS
NEP	Nepeta 'Walkers Low'	WALKERS LOW CATMINT	343	1 GAL.	ALL
SAL	Salvia nemorosa 'Wesuwe'	WESUWE SALVIA	1010	1 GAL.	ALL
SPO	Sporobolus heterolepis	PRAIRIE DROPSEED	699	1 GAL.	ALL
GROUNDCOVER & VINES					
CLE	Clematis Mix:				
	Clematis 'Huldine' (50%)	HULDINE CLEMATIS	37	1 GAL.	CLUBHOUSE
	+ Clematis 'Comtesse de Bouchaud' (50%)	COMTESSE CLEMATIS	37	1 GAL.	CLUBHOUSE
VCM	Vinca minor	COMMON PERIWINKLE	1344	3" POTS	CLUBHOUSE
ABBRV.	LATIN NAME	COMMON NAME		LATIN NAME	COMMON NAME
TRANSITIONAL BUFFER SEED MIX					
	Bouteloua curtipendula	SIDE-OATS GRAMA			
	Bouchloe dactyloides 'Bowie'	BOWIE BUFFALO GRASS			
DETENTION SEED MIX					
Permanent Grasses					
	Andropogon gerardii	BIG BLUESTEM		Panicum virgatum	SWITCH GRASS
	Calamagrostis canadensis	BLUEJOINT GRASS		Scirpus pendulus	RED BULRUSH
	Carex spp.	PRAIRIE SEDGE MIX		Sorgastrum nutans	INDIAN GRASS
	Carex lurida	BOTTLEBRUSH SEDGE		Spartina pectinata	PRAIRIE CORD GRASS
	Elymus virginicus	VIRGINIA WILD RYE			
Temporary Cover					
	Avena sativa	COMMON OAT			
	Lolium mutiflorum	ANNUAL RYE			
Forbs					
	Aster novae-angliae	NEW ENGLAND ASTER		Pycnanthemum virginanum	COMMON MOUNTAIN MINT
	Baptisia lactea	WHITE WILD INDIGO		Ratibida pinnata	YELLOW CONEFLOWER
	Chamaecrista fasciculata	PARTRIDGE PEA		Rudbeckia hirta	BLACK-EYED SUSAN
	Coreopsis lanceolata	SAND COREOPSIS		Rudbeckia laciniata	WILD GOLDEN GLOW
	Coreopsis tripteris	TALL COREOPSIS		Rudbeckia subtomentosa	SWEET BLACK-EYED SUSAN
	Desmodium illoiense	ILLINOIS TICK TREFOIL		Silphium integrifolium	ROSIN WEED
	Echinacea purpurea	PURPLE CONEFLOWER		Silphium laciniatum	COMPASS PLANT
	Eryngium yuccifolium	RATTLESNAKE MASTER		Silphium perfoliatum	CUP PLANT
	Helenium autumnale	SNEEZEWEED		Silphium terebinthinaceum	PRAIRIE DOCK
	Helianthus grosseserratus	SAWTOOTH SUNFLOWER		Solidago juncea	EARLY GOLDENROD
	Lespedeza capitata	ROUND-HEADED BUSH CLOVER		Solidago rigida	STIFF GOLDENROD
	Liatris spicata	MARSH BLAZING STAR		Solidago rugosa	ROUGH GOLDENROD
	Lupinus perennis	WILD LUPINE		Tradescantia ohiensis	COMMON SPIDERWORT
	Monarda fistulosa	WILD BERGAMOT		Veronia spp.	IRONWEED MIX
	Parthenium integrifolium	WILD QUININE		Veronicastrum virginicum	CULVER'S ROOT
	Physostegia virginiana	OBEDIENT PLANT		Zizia aurea	GOLDEN ALEXANDER



Kinsella Landscape, Inc.
Design/Construction/Maintenance
Phone: 708-371-0830
Fax: 708-371-9576

CORPORATE RESERVE
OF ST. CHARLES

REVISIONS

Date	Drawn	Remarks
2011.05.03	DRT	meeting
2011.05.16	PC	meeting

DATE 2012.04.03
DESIGNER MMR
PROJECT MANAGER GK
CLIENT 12101

NORTH

SCALE: 1:20

L-9

PRELIMINARY PLAN
THE CORPORATE RESERVE OF ST. CHARLES – PHASE II
ST. CHARLES, ILLINOIS

LEGEND

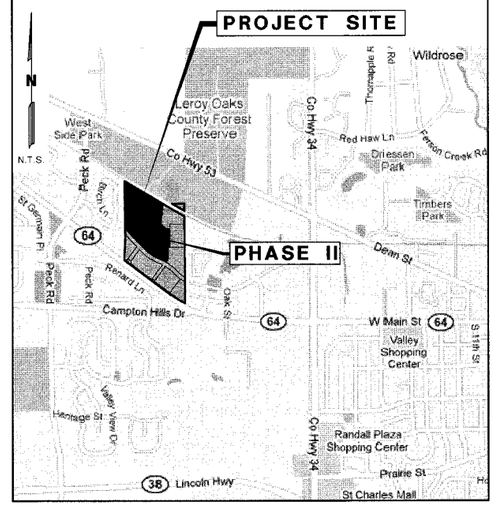
	EXISTING	PROPOSED
SANITARY SEWER	8" PVC	8" PVC
FORCE MAIN	FM	FM
STORM SEWER	12" RCP	12" RCP
UNDERDRAIN	UD	UD
MANHOLE		
CATCH BASIN		
INLET		
CLEANOUT		
WATER MAIN	8" WM	8" WM
VALVE VAULT		
VALVE BOX		
FIRE HYDRANT		
FLARED END SECTION		
COMBINED SEWER		
SANITARY SEWER SERVICE		
WATER SERVICE		
STREET LIGHT/PARKING LOT LIGHT		
POWER POLE		
STREET SIGN		
FENCE		
GAS MAIN	G	G
OVERHEAD LINE	OH	OH
TELEPHONE LINE	T	T
ELECTRIC LINE	E	E
CABLE TV LINE	CATV	CATV
HIGH WATER LEVEL		HWL XXX
NORMAL WATER LEVEL		NWL XXX
CONTOUR LINE	XXX.XX	XXX.XX
TOP OF CURB ELEVATION	TC XXX.XX	TC XXX.XX
TOP OF DEPRESSED CURB	TDC XXX.XX	TDC XXX.XX
PAVEMENT ELEVATION	P XXX.XX	P XXX.XX
SPOT ELEVATION	XXX.XX	XXX.XX
FINISHED FLOOR ELEVATION		FF = XXX.XX
TOP OF FOUNDATION		TF = XXX.XX
GRADE AT FOUNDATION	GF XXX.XX	GF = XXX.XX
HIGH OR LOW POINT		H = L
OVERLAND FLOOD ROUTE		
PAVEMENT FLOW DIRECTION		2.0%
SWALE FLOW DIRECTION		
DEPRESSED CURB AND GUTTER		
REVERSE CURB AND GUTTER		

ABBREVIATIONS

AC	ACRE	HWL	HIGH WATER ELEVATION	SAN	SANITARY SEWER
BC	BACK OF CURB	INL	INLET	SMH	SANITARY MANHOLE
BTM	BOTTOM	INV	INVERT	STA	STATION
CB	CATCH BASIN	LF	LINEAL FEET/FOOT	STM	STORM SEWER
CFS	CUBIC FEET PER SECOND	LP	LIGHT POLE	SY	SQUARE YARD
CY	CUBIC YARD	LT	LEFT	SWPP	STORMWATER POLLUTION PREVENTION PLAN
DIA	DIAMETER	L/W	LOWEST GRADE ADJACENT TO RETAINING WALL	TDC	TOP OF DEPRESSED CURB
DIWM	DUCTILE IRON WATER MAIN	MAX	MAXIMUM	TC	TOP OF CURB
EL	ELEVATION	MH	STORM MANHOLE	TF	TOP OF FOUNDATION
EP	EDGE OF PAVEMENT	MIN	MINIMUM	T/W	TOP OF RETAINING WALL
FF	FINISHED FLOOR	NWL	NORMAL WATER ELEVATION	TYP	TYPICAL
FES	FLARED END SECTION	OCS	OUTLET CONTROL STRUCTURE	VB	VALVE BOX
FT	FOOT/FEET	P	PAVEMENT ELEVATION	VC	VERTICAL CURVE
G	GUTTER ELEVATION	PVC	POLYVINYL CHLORIDE PIPE	VV	VALVE VAULT
GF	GRADE AT FOUNDATION	R	RADIUS	W	WALK ELEVATION
GR	GRADE RING ELEVATION	RCP	REINFORCED CONCRETE PIPE	WM	WATER MAIN
HDPE	HIGH DENSITY POLYETHYLENE PIPE	RIM	RIM ELEVATION	VPI	VERTICAL POINT OF INTERSECTION
HYD	FIRE HYDRANT	RT	RIGHT		
HMA	HOT MIX ASPHALT	ROW	RIGHT OF WAY		

INDEX

LOCATION MAP



SOURCE BENCHMARK:

1. SOUTHWEST TAG BOLT ON 1ST FIRE HYDRANT NORTH OF ROUTE 64 ON WEST SIDE OF PECK ROAD.

   ELEV. = 747.11

2. CHISELLED "+" IN CENTERLINE-CENTERLINE OF CONCRETE SIDEWALK AT SOUTHEAST CORNER OF ROUTE 64

   ELEV. = 744.53

CALL OR DIAL TOLL FREE 1-800-892-0123

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS

Call 48 hours before you dig (Excluding Sat, Sun, & Holidays)

1-800-892-0123

PROFESSIONAL ENGINEER'S CERTIFICATION

I, KEVIN J MATRAY, A LICENSED PROFESSIONAL ENGINEER OF ILLINOIS, HEREBY CERTIFY THAT THIS SUBMISSION WAS PREPARED ON BEHALF OF THE ST. CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC BY MACKIE CONSULTANTS, LLC. UNDER MY PERSONAL DIRECTION. THIS TECHNICAL SUBMISSION IS INTENDED TO BE USED AS AN INTEGRAL PART OF AND IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS.

DATED THIS 16TH DAY OF MAY, A.D. 2012.

ILLINOIS LICENSED PROFESSIONAL ENGINEER 062-058360
EXPIRATION DATE: NOVEMBER 30, 2013

KEVIN J. MATRAY 062-058360 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

ENGINEER'S SEAL

DRAINAGE CERTIFICATION

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SAID IMPROVEMENTS OR ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREA, OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE IMPROVEMENTS.

ENGINEER'S SIGNATURE

KEVIN J. MATRAY 062-058360 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

ENGINEER'S SEAL

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

CLIENT:
ST. CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC
1930 THOREAU DRIVE, SUITE 175
SCHAUMBURG, ILLINOIS 60173
PHONE: (630) 885-7890 FAX: (847) 348-7801

DATE	DESCRIPTION OF REVISION	BY
05-16-12	REVISED PER CITY COMMENTS	KJM

DESIGNED	KJM/TRB
DRAWN	WHM
APPROVED	DAS
DATE	03-22-12
SCALE	N.T.S.

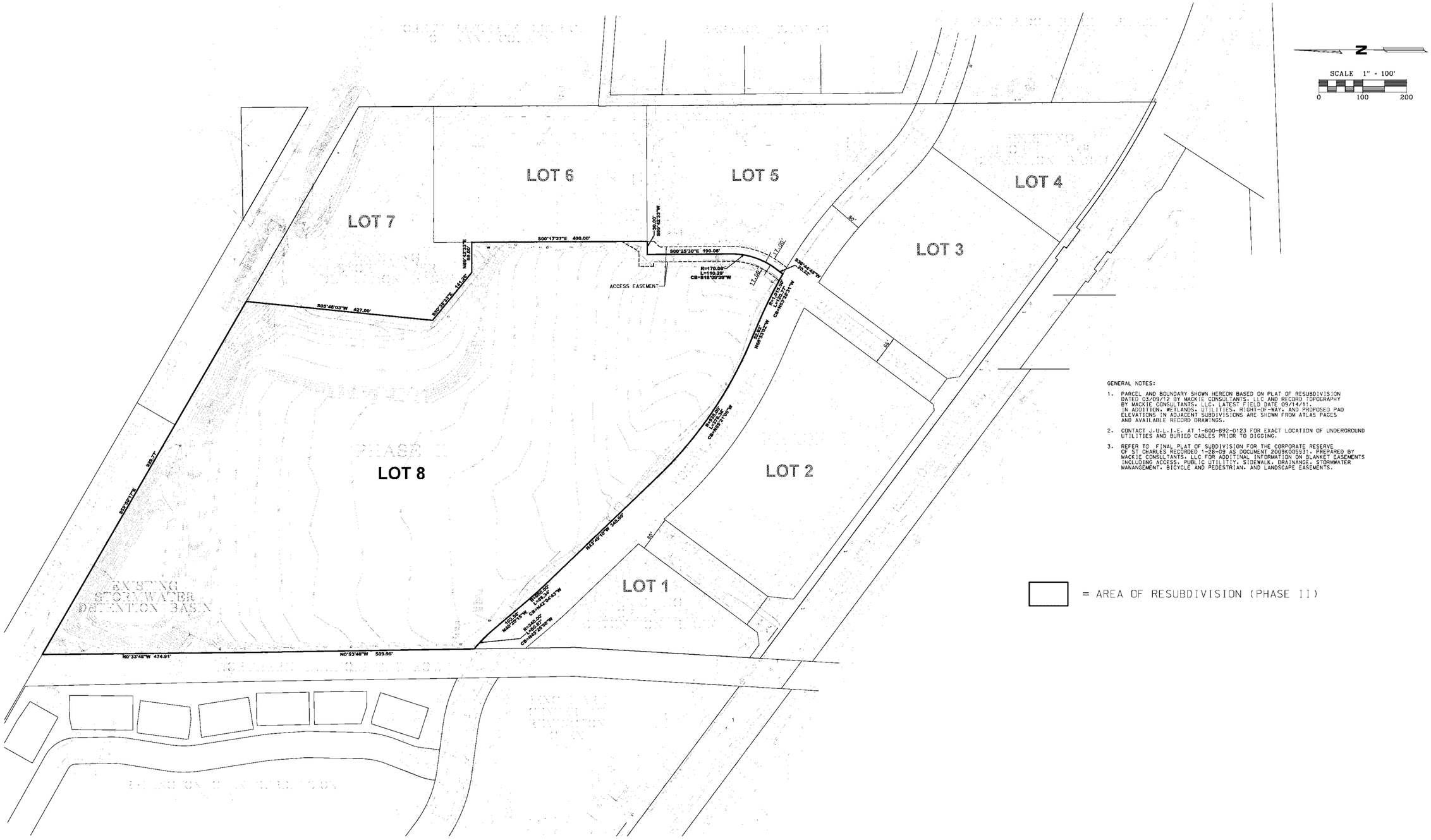
COVER SHEET
PRELIMINARY RESUBDIVISION PLAN
THE CORPORATE RESERVE OF ST. CHARLES PHASE II
ST. CHARLES, ILLINOIS

SHEET 1 OF 5

PROJECT NUMBER: 1521

ILLINOIS FIRM LICENSE 184-002694

5/17/2012 10:52:07 AM N:\1521\Engineering\Plots\1-Phase 2 Apartments\Preliminary\01 cover.plt



GENERAL NOTES:

1. PARCEL AND BOUNDARY SHOWN HEREON BASED ON PLAT OF RESUBDIVISION DATED 03/09/12 BY MACKIE CONSULTANTS, LLC AND RECORD TOPOGRAPHY BY MACKIE CONSULTANTS, LLC, LATEST FIELD DATE 09/14/11. IN ADDITION, WETLANDS, UTILITIES, RIGHT-OF-WAY, AND PROPOSED PAD ELEVATIONS IN ADJACENT SUBDIVISIONS ARE SHOWN FROM ATLAS PAGES AND AVAILABLE RECORD DRAWINGS.
2. CONTACT J.U.L.I.E. AT 1-800-892-0123 FOR EXACT LOCATION OF UNDERGROUND UTILITIES AND BURIED CABLES PRIOR TO DIGGING.
3. REFER TO FINAL PLAT OF SUBDIVISION FOR THE CORPORATE RESERVE OF ST CHARLES RECORDED 1-28-09 AS DOCUMENT 2009K005931, PREPARED BY MACKIE CONSULTANTS, LLC FOR ADDITINAL INFORMATION ON BLANKET EASEMENTS INCLUDING ACCESS, PUBLIC UTILITY, SIDEWALK, DRAINANGE, STORMWATER MANANGEMENT, BICYCLE AND PEDESTRIAN, AND LANDSCAPE EASEMENTS.

= AREA OF RESUBDIVISION (PHASE II)

5/7/2012 10:56:28 AM
N:\STC\Engineering\Plots\Phase 2 Documents\Preliminary\02-existingplat.pdf

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

CLIENT:
ST. CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC
1930 THOREAU DRIVE, SUITE 175
SCHAUMBURG, ILLINOIS 60173
PHONE: (630) 885-7890 FAX: (847) 348-7801

DATE	DESCRIPTION OF REVISION	BY
05-16-12	REVISED PER CITY COMMENTS	KJM

DESIGNED	KJM/TRB
DRAWN	WHM
APPROVED	DAS
DATE	03-22-12
SCALE	1" = 100'

EXISTING CONDITION PLAN
PRELIMINARY RESUBDIVISION PLAN
THE CORPORATE RESERVE OF ST. CHARLES PHASE II
ST. CHARLES, ILLINOIS

SHEET 2 OF 5

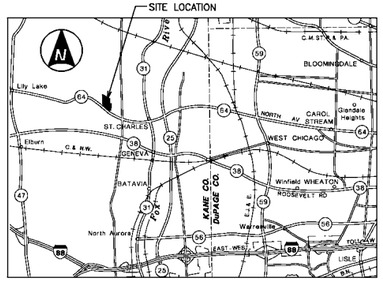
PROJECT NUMBER: 1521

ILLINOIS FIRM LICENSE 184-002694

PRELIMINARY PLAT OF RESUBDIVISION
THE CORPORATE RESERVE OF ST. CHARLES PHASE II

,BEING A RESUBDIVISION OF LOT 8 IN THE CORPORATE RESERVE OF ST. CHARLES, BEING A SUBDIVISION OF PART OF THE SOUTHWEST QUARTER AND THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 40 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED JANUARY 28, 2009 AS DOCUMENT NUMBER 2009K005931, IN KANE COUNTY, ILLINOIS.

SITE LOCATION



LOCATION MAP
(NOT TO SCALE)

SCALE: 1" = 60'

LOT 7
DETENTION/OPEN SPACE
09-29-326-002
THE CORPORATE RESERVE OF ST. CHARLES HOMEOWNERS ASSOCIATION

THE CORPORATE RESERVE OF ST. CHARLES
RECORDED JANUARY 28, 2009
AS DOCUMENT 2009K005931
LOT 6
09-29-326-003

ZONED BC
(COMMUNITY BUSINESS DISTRICT)

LOT 5
09-29-326-004
ACCESS EASEMENT
RECORDED JANUARY 28, 2009
AS DOCUMENT 2009K005931

RECORDING SPACE

P.I.N. NUMBERS:
09-29-326-001

LOT 3
09-29-384-001
ST CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC

CARDINAL DRIVE

LOT 2
382,304 SQ.FT.

LOT 1
499,289 SQ.FT.

LOT 8
THE CORPORATE RESERVE OF ST. CHARLES
RECORDED JANUARY 28, 2009
AS DOCUMENT 2009K005931

PROPOSED ZONING RM-3
(GENERAL RESIDENTIAL DISTRICT)

ZONED O-R
(OFFICE/RESEARCH DISTRICT)

LOT 3
104,133 SQ.FT.
OPEN SPACE/DETENTION

FOREST PRESERVE DISTRICT OF KANE COUNTY

CHICAGO AND NORTHWESTERN RAILROAD(FORMER CHICAGO, GREAT WESTERN RAILROAD R.O.W)

RAILROAD EASEMENT RECORDED AS DOCUMENT 1553397 (TO BE VACATED UNDER SEPARATE DOCUMENT)

SOUTH LINE NORTHWEST QUARTER OF SECTION 29-40-8

LOT 1
DETENTION/OPEN SPACE
09-29-330-001
THE CORPORATE RESERVE OF ST. CHARLES HOMEOWNERS ASSOCIATION

NORTHERN ILLINOIS GAS R.O.W.
RECORDED AS DOCUMENT 1060261
09-29-100-003

100' GRANT OF EASEMENT CERTIFICATION OF WOODWARD DRIVE RECORDED JANUARY 15, 2009 AS DOCUMENT 2009K002550

GRANT OF EASEMENT FOR SANITARY SEWER RECORDED AS DOCUMENT 2008K088864
40' ACCESS EASEMENT RECORDED AS DOCUMENT 1444314
ROAD & UTILITY CROSSING EASEMENT RECORDED AS DOCUMENT 1083202

WOODWARD DRIVE
DEDICATED AS DOCUMENT 2004K046216

BENCHMARK CENTER AT REMINGTON GLEN
PER DOC. 2004K161048
RECORDED DECEMBER 17, 2004

REMINGTON GLEN SUBDIVISION
RECORDED MARCH 31, 2005
AS DOCUMENT 2005K035896
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14

ZONED RM-1
(MIXED MEDIUM DENSITY)

WOODWARD DRIVE
RECORDED JANUARY 28, 2009
AS DOCUMENT 2009K005931

CORPORATE RESERVE BOULEVARD

LOT 2
09-29-331-001
ST CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC

ZONED BC
(COMMUNITY BUSINESS DISTRICT)

THE CORPORATE RESERVE OF ST. CHARLES
RECORDED JANUARY 28, 2009
AS DOCUMENT 2009K005931

GENERAL NOTES:

1. ALL DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF.
2. NO DIMENSIONS SHALL BE DERIVED FROM SCALE MEASUREMENT.

LEGAL DESCRIPTION:

LOT 8 IN THE CORPORATE RESERVE OF ST. CHARLES, BEING A SUBDIVISION OF PART OF THE SOUTHWEST QUARTER AND THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 40 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED JANUARY 28, 2009 AS DOCUMENT NUMBER 2009K005931, IN KANE COUNTY, ILLINOIS.

EASEMENT LEGEND:

LOTS 1 AND 2 ARE COVERED BY A BLANKET EASEMENT FOR ACCESS, PUBLIC UTILITIES, SIDEWALKS AND DRAINAGE.

LOT 3 IS COVERED BY A BLANKET EASEMENT FOR PUBLIC UTILITIES, SIDEWALKS AND DRAINAGE; AND ALSO A STORMWATER DETENTION EASEMENT.

SURVEYOR'S NOTES:

SURVEYOR'S NOTES:
1. THIS PLAT IS SUBJECT TO MATTERS OF TITLE AND APPLICABLE EXCEPTIONS TO TITLE.
2. BOUNDARY SHOWN HEREON BASED ON FINAL PLAT OF SUBDIVISION OF THE CORPORATE RESERVE OF ST. CHARLES RECORDED JANUARY 28, 2009 AS DOCUMENT 2009K005931.
3. PROPERTY IS CURRENTLY ZONED O-R (OFFICE/RESEARCH DISTRICT). PROPOSED ZONING IS RM-3 (GENERAL RESIDENTIAL DISTRICT).
4. ACCORDING TO OUR INTERPRETATION OF THE FLOOD INSURANCE RATES MAP, THE HEREON DESCRIBED PROPERTY FALLS WITHIN ZONE "X" - AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 17089C0261 H WITH A MAP REVISED DATE OF AUGUST 3, 2009.
5. THIS DEVELOPMENT IS A PLANNED UNIT DEVELOPMENT.

SETBACK TABLE	
RM-3 ZONING SETBACKS	
FRONT	= 30 FT. MIN.
SIDE (INTERIOR)	= 25 FT. MIN.
SIDE (EXTERIOR)	= 30 FT. MIN.
REAR	= 30 FT. MIN.

TENTATIVE LOT AREAS	
LOT NUMBER	AREA (SQ.FT.)
1	499,289
2	382,304
3	(O.S./DETENTION)
OPEN SPACE/ DETENTION	AREA
3	104,133
MINIMUM LOT AREA	104,133
LARGEST LOT AREA	382,304
AVERAGE LOT AREA	243,219
NUMBER OF LOTS	3

	AREA (SQ.FT.)	AREA (AC.)
TOTAL OPEN SPACE/ DETENTION LOTS	104,133	2.391
TOTAL SITE AREA	986,695	22.651

OWNER/APPLICANT/DEVELOPER:
ST. CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC
1930 THOREAU DRIVE, SUITE 175
SCHAUMBURG, ILLINOIS 60173
PHONE: (630) 885-7890

ENGINEER/SURVEYOR
MACKIE CONSULTANTS, LLC
9575 WEST HIGGINS ROAD, SUITE 500
ROSEMONT, ILLINOIS 60018
PHONE: (847) 696-1400

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

CLIENT:
ST. CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC
1930 THOREAU DRIVE, SUITE 175
SCHAUMBURG, ILLINOIS 60173
PHONE: (630) 885-7890 FAX: (847) 348-7801

DATE	DESCRIPTION OF REVISION	BY
05-16-12	REVISED PER CITY COMMENTS	KJM

DESIGNED	KJM
DRAWN	DAG
APPROVED	MTB
DATE	03-09-12
SCALE	1"=60'

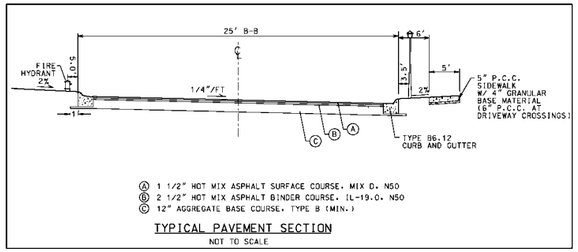
PRELIMINARY PLAT OF RESUBDIVISION
PRELIMINARY RESUBDIVISION PLAN
THE CORPORATE RESERVE OF ST. CHARLES PHASE II
ST. CHARLES, ILLINOIS

SHEET 3 OF 5

PROJECT NUMBER: 1521

ILLINOIS FIRM LICENSE 184-002694

5/7/2012 06:26:24 AM
N:\1521\Surveys\Proposed\Preliminary\Phase II\1521PrelimPlat of Sub Phase 2.dgn



Ⓐ 1 1/2" HOT MIX ASPHALT SURFACE COURSE, MIX D, N50
Ⓑ 2 1/2" HOT MIX ASPHALT BINDER COURSE, IL-19.0, N50
Ⓒ 12" AGGREGATE BASE COURSE, TYPE B (MIN.)

TYPICAL PAVEMENT SECTION

NOT TO SCALE

GRADING PLAN GENERAL NOTES

1. EXISTING CONDITIONS SHOWN ARE BASED ON RECORD TOPOGRAPHY BY MACKIE CONSULTANTS, LLC. LATEST FIELD DATE 09/14/11. CONTRACTOR SHALL FIELD CHECK EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION AND NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES.
2. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6-INCHES OF TOPSOIL AND SEEDED.
3. EXCAVATION AND EMBANKMENT SHALL BE PERFORMED PER FINAL DETAILED SPECIFICATIONS AND THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
4. ALL CURB ELEVATIONS ARE TO BE TOP OF CURB. ALL GUTTER ELEVATIONS ARE 0.5' BELOW TOP OF CURB ELEVATION UNLESS OTHERWISE NOTED.
5. DRIVEWAY SLOPES FROM THE RIGHT-OF-WAY SHALL BE A MINIMUM OF 2% AND A MAXIMUM OF 10%.
6. GRADING INDICATED MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES WITH FIELD CONDITIONS PRIOR TO FINE GRADING.
7. GRADING INDICATED MAY BE ADJUSTED AT TIME OF FINAL ENGINEERING.
8. ALL DRAIN TILES ENCOUNTERED DURING MASS GRADING/UTILITY WORK MUST BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM. A RECORD MUST BE KEPT, OF ANY DRAIN TILE ENCOUNTERED, TO BE INCLUDED IN RECORD DRAWINGS.
9. OVERFLOW DRAINAGE ROUTES AND SWALES MUST BE INSTALLED AT THE ELEVATION AND LOCATION SHOWN.
10. DO NOT INTERRUPT DRAINAGE FROM OFF SITE DURING CONSTRUCTION OPERATIONS. PROVIDE TEMPORARY DRAINAGE DITCHES WHERE REQUIRED.
11. CONTRACTOR SHALL MEET EXISTING GROUND ELEVATIONS AT PROPERTY LINE, UNLESS OTHERWISE NOTED AND THE APPROPRIATE EASEMENTS OR PERMISSION HAS BEEN OBTAINED.
12. ALL PROPOSED RAODWAYS SHALL BE PRIVATELY OWNED AND MAINTAINED.

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

CLIENT:
ST. CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC
1930 THOREAU DRIVE, SUITE 175
SCHAUMBURG, ILLINOIS 60173
PHONE: (630) 885-7890 FAX: (847) 348-7801

DATE	DESCRIPTION OF REVISION	BY
05-16-12	REVISED PER CITY COMMENTS	KJM

DESIGNED	KJM/TRB
DRAWN	WHM
APPROVED	DAS
DATE	03-09-12
SCALE	1" = 60'

PRELIMINARY GRADING PLAN
PRELIMINARY RESUBDIVISION PLAN
THE CORPORATE RESERVE OF ST. CHARLES PHASE II
ST. CHARLES, ILLINOIS

SHEET 4 OF 5

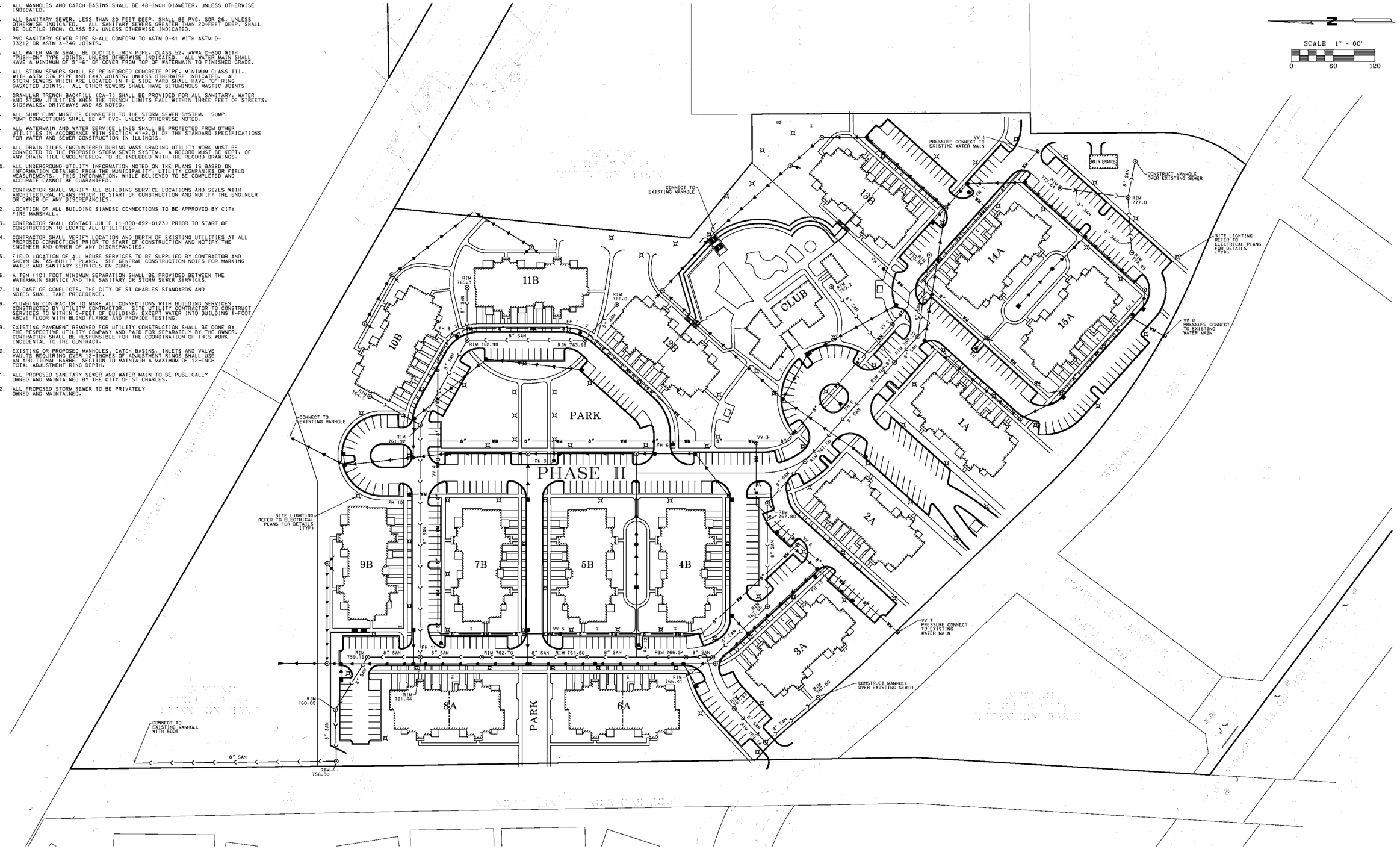
PROJECT NUMBER: 1521

ILLINOIS FIRM LICENSE 184-002694

5/17/2012 10:56:0 AM
N:\521\Engineering\Plots\Phase 2_Apartments\Preliminary\04-grading.dgn

GENERAL NOTES

1. ALL MANHOLES AND CATCH BASINS SHALL BE 48-INCH DIAMETER, UNLESS OTHERWISE INDICATED.
2. ALL SANITARY SEWER, LESS THAN 20 FEET DEEP, SHALL BE PVC, SDR 26, UNLESS OTHERWISE INDICATED. ALL SANITARY SEWERS GREATER THAN 20-FEET DEEP, SHALL BE DUCTILE IRON, CLASS 52, UNLESS OTHERWISE INDICATED.
3. PVC SANITARY SEWER PIPE SHALL CONFORM TO ASTM D-41 WITH ASTM D-3212 OR ASTM A-746 JOINTS.
4. ALL WATER MAIN SHALL BE DUCTILE IRON PIPE, CLASS 52, AWWA C-600 WITH "PUSH-ON" TYPE JOINTS, UNLESS OTHERWISE INDICATED. ALL WATER MAIN SHALL HAVE A MINIMUM OF 5'-6" OF COVER FROM TOP OF WATERMAIN TO FINISHED GRADE.
5. ALL STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE, MINIMUM CLASS III, WITH ASTM C76 PIPE AND C443 JOINTS, UNLESS OTHERWISE INDICATED. ALL STORM SEWERS WHICH ARE LOCATED IN THE SIDE YARD SHALL HAVE "O"-RING GASKETED JOINTS. ALL OTHER SEWERS SHALL HAVE BITUMINOUS MASTIC JOINTS.
6. GRANULAR TRENCH BACKFILL (CA-7) SHALL BE PROVIDED FOR ALL SANITARY, WATER AND STORM UTILITIES WHEN THE TRENCH LIMITS FALL WITHIN THREE FEET OF STREETS, SIDEWALKS, DRIVEWAYS AND AS NOTED.
7. ALL SUMP PUMP MUST BE CONNECTED TO THE STORM SEWER SYSTEM. SUMP PUMP CONNECTIONS SHALL BE 4" PVC, UNLESS OTHERWISE NOTED.
8. ALL WATERMAIN AND WATER SERVICE LINES SHALL BE PROTECTED FROM OTHER UTILITIES IN ACCORDANCE WITH SECTION 41-2.01 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS.
9. ALL DRAIN TILES ENCOUNTERED DURING MASS GRADING UTILITY WORK MUST BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM. A RECORD MUST BE KEPT, OF ANY DRAIN TILE ENCOUNTERED, TO BE INCLUDED WITH THE RECORD DRAWINGS.
10. ALL UNDERGROUND UTILITY INFORMATION NOTED ON THE PLANS IS BASED ON INFORMATION OBTAINED FROM THE MUNICIPALITY, UTILITY COMPANIES OR FIELD MEASUREMENTS. THIS INFORMATION, WHILE BELIEVED TO BE COMPLETED AND ACCURATE CANNOT BE GUARANTEED.
11. CONTRACTOR SHALL VERIFY ALL BUILDING SERVICE LOCATIONS AND SIZES WITH ARCHITECTURAL PLANS PRIOR TO START OF CONSTRUCTION AND NOTIFY THE ENGINEER OR OWNER OF ANY DISCREPANCIES.
12. LOCATION OF ALL BUILDING SIAMESE CONNECTIONS TO BE APPROVED BY CITY FIRE MARSHALL.
13. CONTRACTOR SHALL CONTACT JULIE (1-800-892-0123) PRIOR TO START OF CONSTRUCTION TO LOCATE ALL UTILITIES.
14. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES AT ALL PROPOSED CONNECTIONS PRIOR TO START OF CONSTRUCTION AND NOTIFY THE ENGINEER AND OWNER OF ANY DISCREPANCIES.
15. FIELD LOCATION OF ALL HOUSE SERVICES TO BE SUPPLIED BY CONTRACTOR AND SHOWN ON "AS-BUILT" PLANS. SEE GENERAL CONSTRUCTION NOTES FOR MARKING WATER AND SANITARY SERVICES ON CURB.
16. A TEN (10) FOOT MINIMUM SEPARATION SHALL BE PROVIDED BETWEEN THE WATERMAIN SERVICE AND THE SANITARY OR STORM SEWER SERVICES.
17. IN CASE OF CONFLICTS, THE CITY OF ST CHARLES STANDARDS AND NOTES SHALL TAKE PRECEDENCE.
18. PLUMBING CONTRACTOR TO MAKE ALL CONNECTIONS WITH BUILDING SERVICES CONSTRUCTED BY UTILITY CONTRACTOR. SITE UTILITY CONTRACTOR TO CONSTRUCT SERVICES TO WITHIN 5-FEET OF BUILDING, EXCEPT WATER INTO BUILDING 1-FOOT ABOVE FLOOR WITH BLIND FLANGE AND PROVIDE TESTING.
19. EXISTING PAVEMENT REMOVED FOR UTILITY CONSTRUCTION SHALL BE DONE BY THE RESPECTIVE UTILITY COMPANY AND PAID FOR SEPARATELY BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THIS WORK INCIDENTAL TO THE CONTRACT.
20. EXISTING OR PROPOSED MANHOLES, CATCH BASINS, INLETS AND VALVE VAULTS REQUIRING OVER 12-INCHES OF ADJUSTMENT RINGS SHALL USE AN ADDITIONAL BARREL SECTION TO MAINTAIN A MAXIMUM OF 12-INCH TOTAL ADJUSTMENT RING DEPTH.
21. ALL PROPOSED SANITARY SEWER AND WATER MAIN TO BE PUBLICALLY OWNED AND MAINTAINED BY THE CITY OF ST CHARLES.
22. ALL PROPOSED STORM SEWER TO BE PRIVATELY OWNED AND MAINTAINED.



			DESIGNED	KJM/TRB	
			DRAWN	WHM	
			APPROVED	DAS	
05-16-12	REVISED PER CITY COMMENTS	KJM	DATE	03-09-12	
DATE	DESCRIPTION OF REVISION	BY	SCALE	1" = 60'	

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

CLIENT:
ST. CHARLES FAIRGROUNDS OFFICE PARK INVESTORS, LLC
1930 THOREAU DRIVE, SUITE 175
SCHAUMBURG, ILLINOIS 60173
PHONE: (630) 885-7890 FAX: (847) 348-7801

PRELIMINARY UTILITY PLAN
PRELIMINARY RESUBDIVISION PLAN
THE CORPORATE RESERVE OF ST. CHARLES PHASE II
ST. CHARLES, ILLINOIS

SHEET 5 OF 5

PROJECT NUMBER: 1521

ILLINOIS FIRM LICENSE 184-002694

5/17/2012 8:55:37 AM
N:\521\Engineering\Plots\Phase 2_Apartments\Preliminary\05-util11x17.plt


Site Data
Site A Area (Gross) 17.83 Ac. (Gross)
Detention 2.26 Ac.
Site A Area (Net) 15.57 Ac. (Net)
Site B Area (Net) 4.23 Ac. (Net)
Total Area (Net) 19.80 Ac. (Net)
Total Units 407
Total Area/Unit 2,119 SF/Unit
Ground Fl. Retail/Flex 3,500 SF GLA
Residential Parking
468 Surface Spaces
256 Garage Spaces
714 Total Net Spaces (1.75:1)
72 Tandem (Stacked) Spaces
786 Total Spaces (1.93:1)
Retail/Flex Parking
14 Surface Spaces (4/1,000 SF)
Existing Pedestrian Trail
Randall Road Trail
Future Pedestrian (Great Western) Trail
Detention
3 Story Walk-Up
21 Units/ Building
8 Garages/ Building
4 Story Mid Rise
11 Units/ Floor
44 Units / Building
36 Garage Spaces Below
Park
Club
Fitness Center
Existing Office Buildings
SITE A
SITE B
Tower
Detention
WOODWARD DRIVE
CORPORATE RESERVE BLVD.
MAIN STREET
3 Story Mixed Use Building
3,500 Ground Floor GLA / Bldg.
12 Rental Units
8 Garage Spaces / Bldg
Future Development

Corporate Reserve of St. Charles

Traffic Impact Study

Prepared for:

The City of St. Charles
July 3, 2012

Prepared by:

Hampton, Lenzini and Renwick, Inc.
Civil Engineers ▫ Structural Engineers ▫ Land Surveyors
380 Shepard Drive
Elgin, Illinois 60123

TABLE OF CONTENTS

I. Executive Summary

This report presents the findings and conclusions of a traffic impact study conducted for a proposed residential development located on the north side of Illinois Route 64 (IL 64), the second phase of the Corporate Reserve of St. Charles, approximately 1,500 feet east of Peck Road.

The proposed development will utilize the existing full access, Corporate Reserve Boulevard, onto IL 64 approximately 1,500 feet east of Peck Road and the existing right-turn in only/right-turn out only (RIRO) entrance approximately 2,000 feet east of Peck Road. Access to Peck Road is provided via Woodward Drive.

The findings of this report are as follows:

IL Route 64 & Peck Road: This intersection is currently operating over capacity with the existing traffic volumes. Site traffic will be an incremental addition to this over-saturated condition. The addition of the site traffic along with a re-optimization of the signal timings will result in improved intersection operations, though the traffic volumes will still exceed the capacity of the intersection. In order to bring all movements of this intersection to an acceptable LOS for all scenarios (Existing, 2022 Base Traffic, 2022 Build Traffic, and 2022 Total Traffic) an additional through lane is needed in each direction on IL 64 along with traffic signal timing optimization.

IL Route 64 & Campton Hills Road: This intersection is currently operating over capacity with the existing traffic volumes. The large amount of east/west traffic leaves very few gaps for drivers from Campton Hills Road to turn on to IL 64. The IL 64 & Oak Street improvement will provide an additional through lane to both the east- and westbound approaches of this intersection. Once completed, all movements at this intersection will operate at an acceptable LOS. The addition of the site traffic will not noticeably affect the delay observed at this intersection. No additional changes are needed to accommodate the proposed site traffic.

IL Route 64 & Corporate Reserve Boulevard:
With the assumption that an additional through lane in each direction on IL 64 will be added and this intersection will be signalized, this intersection has the overall capacity to accommodate the 2022 Total Traffic.

Peck Road & Woodward Drive:
This intersection has the overall capacity to accommodate the 2022 Total Traffic. No changes are needed from the existing geometrics.

Woodward Drive & Corporate Reserve Boulevard:
This intersection has the overall capacity to accommodate the 2022 Total Traffic. No changes are needed from the existing geometrics.

Woodward Drive & Cardinal Drive:
This intersection has the overall capacity to accommodate the 2022 Total Traffic. No changes are needed from the existing geometrics.

Comparison to the Cardinal Property Traffic Impact Study:

The results of this study were compared to the Cardinal Property Traffic Impact Study (TIS) performed in 2008. The key difference between the original Cardinal Property TIS and this report is a modification of the proposed site plan to replace 490,000 s.f. of office space with 331 residential apartments. This results in a lower volume of trips generated by the site. Overall, the delay and LOS are improved with the change from office to residential. When the intersections included in both studies are compared, all intersections except for one observe a decrease in average delay. The exception is the AM peak period of IL 64 & Corporate Reserve Boulveard, which increases from 8 to 21 seconds.

II. Introduction

This report presents the findings and conclusions of a traffic impact study conducted for a proposed residential development located on the north side of Illinois Route 64 (IL 64), the second phase of the Corporate Reserve of St. Charles, approximately 1,500 feet east of Peck Road. A general location map of the study area is provided as Exhibit 1 in the Appendix. A preliminary site plan of the proposed development is provided as Exhibit 2.

The proposed development will utilize the existing full access, Corporate Reserve Boulevard, onto IL 64 approximately 1,500 feet east of Peck Road and the existing right-turn in only/right-turn out only (RIRO) entrance approximately 2,000 feet east of Peck Road. Access to Peck Road is provided via Woodward Drive.

III. Existing Conditions

A field reconnaissance of the site was conducted to inventory information of surrounding land uses and the area roadway network. In addition, traffic counts were conducted during the morning and evening peak periods at four critical intersections.

Surrounding Land Uses

Land uses surrounding the site to the west include predominantly residential and office properties. The land uses along IL 64 to the east of the site become more dense, consisting of commercial/retail and industrial/manufacturing uses. Immediately north of the site is the Leroy Oakes Forest Preserve. The Great Western Trail multi-use path separates the proposed development from the forest preserve. To the south of the site, at the intersection of Peck Road and Campton Hills Road, is the Campton Hills Park operated by the St. Charles Park District. This is a regional park that offers a variety of recreation opportunities.

Surrounding Roadway Network

The primary roadways servicing the study area are IL 64, Peck Road, and Woodward Drive. As mentioned above, access is proposed to/from both IL 64 and Peck Road. A brief description of the primary roadways is provided below:

- **Illinois Route 64** is a two-lane east-west principal arterial roadway with continuity throughout DeKalb, Kane, Dupage, and Cook counties. Because of its regional significance in the Chicago metropolitan area, the Illinois Department of Transportation (IDOT) has designated IL 64 as a Strategic Regional Arterial (SRA). Near the proposed development, IL 64 consists of rural cross-section with one lane in each direction with exclusive left-turn lanes at Peck Road and other critical intersections. Sidewalks are not present along IL 64. IL 64 near the site has a posted speed limit of 45 miles per hour (mph). IL 64 is under the jurisdiction of IDOT and, according to IDOT traffic maps, carries approximately 22,700 vehicles per day in the vicinity of the proposed development.

- **Peck Road** is a two-lane north-south collector roadway that extends from Kaneville Road in the City of Geneva north to Dean Street. The north Peck Road approach to the IL 64 intersection consists of an urban cross-section with curb and gutter which then

transitions to a rural cross-section with aggregate/ turf shoulders and open ditch drainage north to Dean Street. There is an existing bike path along the west side of Peck Road adjacent to the existing residential subdivision. At the IL 64 intersection, Peck Road consists of a wider urban cross-section that includes one through lane in each direction with separate left-turn lane for vehicles turning onto IL 64. Peck Road is posted with a 35 mph speed limit in the vicinity of the site and is under the jurisdiction of the City of St. Charles.

The intersection of Peck Road with IL 64 was improved about ten years ago to include exclusive left-turn lanes and span-wire mounted traffic signals. Actuated (push-button) pedestrian signals are present along the west side of Peck Road to cross IL 64. Abbreviated or "Chicago" style left-turn lane tapers are striped on both the north and south approaches.

- **Woodward Drive** is a two-lane, two-way, east-west collector street that extends from Peck Road east to a dead end approximately 500 feet west of Randall Road. Woodward Drive is ultimately planned to connect to Randall Road as this area develops further. Woodward Drive is under the jurisdiction of the City of St. Charles and is posted with a 25 mph speed limit.

Existing Traffic Conditions

Peak period turning movement traffic counts were conducted on weekdays from 6:30 – 8:30 AM and from 4:30 – 6:30 PM March 2012 at the following intersections:

- IL Route 64 & Peck Road
- IL Route 64 & Campton Hills Road
- Peck Road & Woodward Drive
- Woodward Drive & Cardinal Drive

Exhibit 3 in the Appendix presents the existing peak hour volumes at these intersections. Using these counts and knowledge of the surrounding area, traffic volumes were estimated at the intersections of IL 64 & Corporate Reserve Boulevard and Woodward Drive & Corporate Reserve Boulevard. In order to gain an understanding of existing traffic operations, capacity analyses were conducted for the existing morning and evening peak hours at each of these intersections. The results of these analyses are discussed later in this report.

Historical traffic data in the area near the project site were reviewed to determine if there were any growth trends. After this review and in conjunction with City of St. Charles staff comments, it was determined that an annual growth rate of 0.5% would be applied linearly (5% total over 10 years) to the existing volumes to develop the 2022 Base Traffic volumes shown in Exhibit 4.

Capacity analyses for the 2022 Base Traffic scenario were performed at each of the project intersections. Note that the capacity analysis for IL 64 & Campton Hills Road includes improvements from the IL 64 & Oak Street Traffic Signal Installation project. The improvements include an additional through lane on the both the east- and westbound approaches of IL 64.

Level of Service (LOS) criteria for signalized and stop-sign controlled intersections are based on the methodologies presented in the "Highway Capacity Manual" published by the Transportation Research Board (TRB). LOS criteria range from "A" (good) to "F" (poor) and are based on

average delay in seconds per vehicle. It should be noted that the LOS thresholds are different for signalized and stop-sign controlled intersections. At two-way stop intersections, LOS criteria for stop-sign controlled intersections are defined for each minor movement and are ***not*** defined for the intersection as a whole. The LOS delay thresholds for stop-sign controlled intersections are also lower than for signalized intersections since driver expectation at a signalized intersection is for a greater delay. The LOS criteria for signalized and stop-sign controlled intersections are presented below in Table 1.

Table 1
Level of Service Criteria for Signalized and Stop-Sign Controlled Intersections[1]
Signalized Intersections

Level of Service	Type of Operating Condition	Average Vehicle Delay (seconds)
A	Very low delay, most vehicles arrive during the green and do not stop at all.	≤ 10.0
B	More vehicles stop at the traffic signal than LOS "A", but otherwise good progression of traffic through the intersection.	10.1 – 20.0
C	Congestion starts to occur; number of vehicles stopping at the intersection is significant.	20.1 – 35.0
D	Congestion is more noticeable, longer delays; some vehicles may not clear on a single cycle.	35.1 – 55.0
E	High delays, poor progression through intersection. Most vehicles do not clear the intersection on a single cycle.	55.1 – 80.0
F	Unacceptable high delay to drivers, demand exceeds capacity, increasing queue lengths.	> 80.0

Stop-Sign Controlled Intersections

Level of Service	Average Control Delay (sec/veh.)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	>50

Table 2 below presents the existing and 2022 Base Traffic operations at IL 64 & Peck Road. Analysis of existing traffic was conducted using existing signal controller settings and existing intersection geometry. Analysis of 2022 Base Traffic retained existing intersection geometry *but assumed that the traffic signal timings would be re-optimized*. Copies of the capacity analysis summaries conducted for the existing critical intersections are contained in the Appendix.

[1] Source: Highway Capacity Manual 2010, Transportation Research Board, National Research Council, Washington, D.C

Table 2
Summary of Existing and 2022 Base Traffic Conditions
Intersection Level of Service (LOS) and Delay (seconds)
Signalized Intersections

	Existing 2012 Traffic		2022 Base Traffic	
Intersection	AM Peak	PM Peak	AM Peak	PM Peak
IL 64 & Peck Rd.	F (104)	D (47)	E (56)	D (42)

It should be noted that some individual movements operate at LOS E or F. Table 3 below gives a detailed breakdown of the 2022 Base Traffic, showing each individual movement's Level of Service.

Table 3
LOS & Delay by Movement for 2022 Base Traffic

			LOS & (delay) by Movement							
			Eastbound		Westbound		Northbound		Southbound	
Intersection	Peak Hour	Overall LOS & (delay)	L	TR	L	TR	L	TR	L	TR
IL 64 & Peck Rd.	AM	E (56)	A (7)	E (60)	C (34)	B (15)	D (45)	F (98)	D (46)	E (61)
	PM	D (42)	C (25)	C (28)	B (16)	D (40)	D (53)	D (53)	D (48)	E (66)

Analysis results show that under the existing conditions and signal timings, this intersection operates at an overall LOS F during the AM peak and LOS D during the PM peak. With background traffic growth projected to 2022, *and signal timings re-optimized*, there will be a noticeable decrease in delay during the AM peak and a slight decrease during the PM peak. Vehicle queues (stacking) exceed the provided left turn lane storage in both the existing and 2022 Base Traffic scenarios. *Traffic volumes currently exceed the capacity of the intersection.*

Table 4 on the following page shows a summary of analysis results for stop-sign controlled intersections. Capacity analyses of stop-sign controlled intersections provide Levels of Service and delays for individual intersection movements, but not the intersection as a whole. Results for the most critical movement at each intersection are shown in the table on the following page.

Table 4
Summary of Existing and 2022 Base Traffic Conditions
Level of Service (LOS) and Delay (seconds)
Stop-sign Controlled Intersections

	Existing 2012 Traffic		2022 Base Traffic	
Critical Movement	AM Peak	PM Peak	AM Peak	PM Peak
Campton Hills Rd. at IL 64*	N.B. F (271)	N.B. C (20)	N.B. D (28)	N.B. B (13)
Corp. Reserve Blvd. at IL 64	S.B.Left C (17)	S.B.Left C (18)	S.B.Left C (18)	S.B.Left C (18)
Woodward Dr. at Peck Rd.	W.B. B (11)	W.B. B (11)	W.B. B (10)	W.B. B (12)
Cardinal Dr. at Woodward Dr.	N.B. A (9)	N.B. A (9)	N.B. A (9)	N.B. A (9)
Corp. Reserve Blvd. at Woodward Dr.	N.B. A (8)	N.B. A (8)	N.B. A (8)	N.B. A (8)

* Northbound movement represents eastbound Campton Hills Road

Analysis of existing conditions and 2022 Base Traffic shows that the critical movements at the majority of the stop-controlled intersections included in the analysis operate at acceptable LOS C or better. There is one exception described below, which operates below an acceptable Level of Service.

Campton Hills Road at IL Route 64: The northbound (eastbound Campton Hills Road) movement during the AM peak hour currently operates at LOS F. Delays up to 271 seconds (4.5 minutes) may be observed. This delay can be attributed to the large IL 64 east- and westbound through traffic conflicting with the northbound (eastbound Campton Hills Road) movement. The expected 95% queue (vehicle stacking) approaches 595 feet.

This condition is alleviated with the IL 64 & Oak Street improvement. The IL 64 & Oak Street improvement adds an additional through lane to both the east- and westbound approaches of the Campton Hills Road intersection. With this geometric improvement, the expected delay and LOS improve to an acceptable level.

IV. Site Traffic Characteristics of Proposed Development

Proposed Land Uses
The site plan for phase 2 of the proposed development consists of 331 residential apartments and a clubhouse.

Estimated Site-Generated Traffic
Site-generated traffic was estimated using the ITE *Trip Generation Manual, 8th Edition*. The volume generated by the apartments was modeled with ITE Code 220, Apartment. The anticipated number of units, 331, was used to estimate morning and evening peak hour trips to and from the site. The resulting generated traffic is shown in Table 5 on the following page.

Table 5
Trip Generation Table

Land Use	ITE Code	Units	Qty	AM Peak Hour Volumes (veh/hr)			PM Peak Hour Volumes (veh/hr)		
				In	Out	Total	In	Out	Total
Residential	220	D.U.	331	34	135	169	133	72	205

Source: ITE Trip Generation Manual, 8th Edition

Estimated Trip Distribution

The direction by which traffic will approach and depart the site is dependent on a variety of factors. These factors include existing travel patterns, characteristics and operating conditions of the surrounding roadways, ease of access, and location of population and employment centers. Based on these factors and a familiarity with the sites and the environs, trip distribution estimates were developed and are presented in Table 6 below and on Exhibit 5 in the Appendix.

It should be noted that the intersection of IL 64 & Oak Street will be signalized by the time this site is developed. It is assumed that until the out lots of the Corporate Reserve are developed and occupied, all traffic traveling from the site to the east during the peak hours will utilize the new traffic signal at Oak Street. Once the proposed site and out lots are developed and occupied, it is expected that a traffic signal at IL 64 & Corporate Reserve Boulevard will be warranted and installed. At this time, it is assumed that traffic traveling from the site to the east during peak hours will utilize this new signal.

Table 6
Trip Distribution Estimates

Direction To/From	Percentage of Trips
West on IL 64	5%
East on IL 64	70%
North on Peck Rd.	10%
South on Peck Rd.	15%

Site Traffic Assignments

The estimated site-generated traffic volumes from the proposed development were assigned to the area roadway system based on the directional distribution identified above and on Exhibit 5. The site generated trip assignments for the proposed Corporate Reserve development are illustrated on Exhibit 6 in the Appendix.

Total Traffic Assignments

The development's generated site traffic assignment was then combined with the 2022 Base Traffic projected traffic to develop a 2022 Build Traffic assignment, shown on Exhibit 7 in the Appendix.

An additional scenario, 2022 Total Traffic, was developed combining the 2022 Build Traffic with the traffic generated by the outlots of the Corporate Reserve. The outlots of the Corporate Reserve are described in a previous traffic impact study performed by Hampton, Lenzini & Renwick, Inc. (HLR)[2]. These outlots are anticipated to include 60,000 s.f. of office space and

[2] Cardinal Property Traffic Impact Study dated July 14, 2008

20,000 s.f. of restaurant (no breakfast service). Trip generation rates and distributions used in this study remain unchanged from the original report and are shown in Table 7 below. The 2022 Total Traffic assignment can be seen in Exhibit 8.

Table 7
Trip Generation Table

Land Use	ITE Code	Units	Qty	AM Peak Hour Volumes (veh/hr)			PM Peak Hour Volumes (veh/hr)		
				In	Out	Total	In	Out	Total
General Office	710	1000 s.f.	30,000	62	8	70	20	100	120
General Office	710	1000 s.f.	45,000	88	12	100	24	116	140
Quality Restaurant	931	1000 s.f.	20,000	10	5	15	100	50	150
Restaurant Pass-by Trips				0	0	0	(15)	(15)	(30)
Total Trips				160	25	185	129	251	380

Source: ITE Trip Generation Manual, 7th Edition

V. Future Traffic Operations

Traffic Operations

Capacity analyses were conducted using the estimated 2022 Build Traffic volumes at the five intersections included in this study. Table 8 below presents the results of the capacity analyses at IL 64 & Peck Road and provides a comparison to the year 2022 Base Traffic discussed earlier in this report.

Table 8
Summary of 2022 Base Traffic and 2022 Build Traffic Conditions
Intersection Level of Service (LOS) and Delay (seconds)
Signalized Intersections

	2022 Base Traffic		2022 Build Traffic	
Intersection	AM Peak	PM Peak	AM Peak	PM Peak
IL 64 & Peck Rd.	E (56)	D (42)	E (57)	D (42)

Note that when site traffic is added, the overall average intersection delay during the AM peak increases by approximately one second and remains unchanged during the PM peak.. Table 9 below shows a detailed breakdown of individual movements for the 2022 Build Traffic.

Table 9
LOS & Delay by Movement for 2022 Build Traffic

Intersection	Peak Hour	Overall LOS & (delay)	LOS & (delay) by Movement							
			Eastbound		Westbound		Northbound		Southbound	
			L	TR	L	TR	L	TR	L	TR
IL 64 & Peck Rd.	AM	E (57)	A (7)	E (60)	D (35)	B (15)	D (45)	F (105)	D (46)	E (61)
	PM	D (42)	C (25)	C(29)	B (17)	D (41)	D (53)	D (55)	D (48)	E (66)

Analysis of the 2022 Build Traffic shows that with the projected site traffic and re-optimized signal timings, the intersection operates at an overall LOS E during the AM peak and LOS D during the PM peak. These are the same levels of service calculated for the 2022 Base Traffic. Some individual movements operate at LOS E and F during peak times. Individual movements observe either no increase or small increases in average delay when compared to the 2022 Base Traffic. Like the existing condition, vehicle queues are expected to exceed the provided left-turn storage lanes during peak times. As is the case with the existing conditions, vehicle volumes are expected to exceed the capacity of the intersection.

Table 10 shows a summary of analysis results for stop-sign controlled intersections. As noted before, capacity analyses of stop-sign controlled intersections provide Levels of Service and delays for individual intersection movements, but not the intersection as a whole. Results for the most critical movement at each intersection are shown in Table 10 below.

Table 10
Summary of 2022 Base Traffic and 2022 Build Traffic Conditions
Level of Service (LOS) and Delay (seconds)
Stop-sign Controlled Intersections

	2022 Base Traffic		2022 Build Traffic	
Critical Movement	AM Peak	PM Peak	AM Peak	PM Peak
Campton Hills Rd. at IL 64*	N.B. D (28)	N.B. B (13)	N.B. D (28)	N.B. B (13)
Corp. Reserve Blvd. at IL 64	S.B.Left C (18)	S.B.Left C (18)	S.B.Left C (18)	S.B.Left C (19)
Woodward Dr. at Peck Rd.	W.B. B (10)	W.B. B (12)	W.B. A (10-)	W.B. B (12)
Cardinal Dr. at Woodward Dr.	N.B. A (9)	N.B. A (9)	N.B. A (10-)	N.B. A (9)
Corp. Reserve Blvd. at Woodward Dr.	N.B. A (8)	N.B. A (8)	S.B. A (10-)	N.B. B (11)

* Northbound movement represents eastbound Campton Hills Road

Analysis of 2022 Build Traffic shows that critical movements at the stop-controlled intersections included in the analysis all operate at LOS D or better. LOS D is considered an acceptable LOS.

VI. Total Traffic Operations

In order to compare the traffic impacts from this study to the previous Cardinal TIS referenced earlier in this report, capacity analyses were conducted using the estimated 2022 Total Traffic volumes at the five intersections included in this study. The 2022 Total Traffic condition includes the proposed residential site as well as the office and restaurant uses in the outlots of the Corporate Reserve. Table 11 on the following page presents the results of the capacity analyses at IL 64 & Peck Road and provides a comparison to the year 2022 Build Traffic discussed earlier in this report.

Table 11
Summary of 2022 Build Traffic and 2022 Total Traffic Conditions
Intersection Level of Service (LOS) and Delay (seconds)
Signalized Intersections

	2022 Build Traffic		2022 Total Traffic	
Intersection	AM Peak	PM Peak	AM Peak	PM Peak
IL 64 & Peck Rd.	E (57)	D (42)	E (72)	D (53)

When compared to the Build Traffic, the overall average intersection delay increases by 12 seconds during the AM peak and 11 seconds during the PM peak. Table 12 below shows a detailed breakdown of individual movements for the 2022 Total Traffic.

Table 12
LOS & Delay by Movement for 2022 Total Traffic

			LOS & (delay) by Movement							
			Eastbound		Westbound		Northbound		Southbound	
Intersection	Peak Hour	Overall LOS & (delay)	L	TR	L	TR	L	TR	L	TR
IL 64 & Peck Rd.	AM	E (72)	A (7)	E (79)	D (36)	B (15)	D (45)	F (129)	D (46)	E (62)
	PM	D (53)	C (32)	C (31)	B (18)	E (61)	E (66)	E (57)	D (48)	E (78)

Analysis of the 2022 Total Traffic shows that with the projected site traffic, the Corporate Reserve out lot traffic, and re-optimized signal timings, the intersection operates at an overall LOS E during the AM peak and LOS D during the PM peak. Some individual movements operate at LOS E and F during peak times. Like the existing and 2022 Build Traffic conditions, vehicle queues are expected to exceed the provided left-turn storage lanes during peak times. As is the case with the existing and 2022 Build Traffic conditions, vehicle volumes are expected to exceed the capacity of the intersection.

It is anticipated that with the 2022 Total Traffic, a traffic signal will be warranted and installed at the intersection of IL 64 & Corporate Reserve Boulevard. A traffic signal warrant analysis is presented later in this report. Table 13 below provides a summary of the capacity analysis at this intersection with traffic signal control. It is assumed that when this traffic signal is installed that IL 64 will be widened to two through lanes in each direction.

Table 13
LOS & Delay by Movement for 2022 Total Traffic

			LOS & (delay) by Movement				
			Eastbound		Westbound	Southbound	
Intersection	Peak Hour	Overall LOS & (delay)	L	TR	TR	L	R
IL 64 & Corp. Reserve Blvd.	AM	C (21)	A (9)	C (21)	B (17)	C (32)	C (31)
	PM	C (23)	B (14)	B (18)	C (24)	C (33)	C (33)

Table 14 shows a summary of analysis results for the stop-sign controlled intersections. As noted before, capacity analyses of stop-sign controlled intersections provide Levels of Service

and delays for individual intersection movements, but not the intersection as a whole. Results for the most critical movement at each intersection are shown in Table 14 below.

Table 14
Summary of 2022 Build Traffic and 2022 Total Traffic Conditions
Level of Service (LOS) and Delay (seconds)
Stop-sign Controlled Intersections

	2022 Build Traffic		2022 Total Traffic	
Critical Movement	AM Peak	PM Peak	AM Peak	PM Peak
Campton Hills Rd. at IL 64*	N.B. D (28)	N.B. B (13)	N.B. D (35-)	N.B. B (14)
Corp. Reserve Blvd. at IL 64	S.B.Left C (18)	S.B.Left C (19)	Signalized	
Woodward Dr. at Peck Rd.	W.B. A (10-)	W.B. B (12)	W.B. B (10)	W.B. B (13)
Cardinal Dr. at Woodward Dr.	N.B. A (10-)	N.B. A (9)	N.B. A (10-)	N.B. B (11)
Corp. Reserve Blvd. at Woodward Dr.	N.B. A (10-)	N.B. B (11)	S.B. B (10)	N.B. C (16)

* Northbound movement represents eastbound Campton Hills Road

Analysis of 2022 Total Traffic shows that critical movements at the stop-controlled intersections included in the analysis all operate at LOS D or better. LOS D is considered an acceptable LOS.

Traffic Signal Warrants:

A traffic signal warrant was analyzed for IL 64 & Corporate Reserve Boulevard per Chapter 4 of the Manual on Uniform Traffic Control Devises (MUTCD) and IDOT guidelines[3]. IL Route 64 is designated an SRA route by IDOT. IDOT uses higher thresholds on SRA routes for signal warrants 1A & 1B than are in the MUTCD and does not allow the use of warrants 2 & 3. In order to produce 8th maximum hour traffic volumes for warrant 1, IDOT guidelines allow using 55% of the peak hour traffic volumes[4]. The traffic signal warrant summary sheets are Exhibit 9 in the Appendix.

IL Route 64 & Corporate Reserve Boulevard (2022 Build Traffic): The traffic signal warrant analysis for this intersection was performed with all eastbound traffic from the site using this intersection rather than Oak Street. Using the 55% factor to estimate 8th maximum hour traffic along with the required IDOT right turn reduction, projected traffic at this intersection does not meet a traffic signal warrant.

IL Route 64 & Corporate Reserve Boulevard (2022 Total Traffic): Using the 55% factor to estimate 8th maximum hour traffic along with the required IDOT right turn reduction, it is anticipated that this intersection will warrant a traffic signal once all phases of the development are occupied.

[3] IDOT Signal Warrant Worksheet Procedures
[4] IDOT BDE Manual, 2002 Ed., p. 14-3(3), item 4c. Proposed Volumes

VII. Findings and Recommendations

The estimates and analyses discussed in the preceding pages, based on the proposed site layout and access as shown in Exhibit 2, indicate the following:

IL Route 64 & Peck Road:

This intersection is currently operating over capacity with the existing traffic volumes. Site traffic will be an incremental addition to this over-saturated condition. Re-optimization of the signal timings will result in improved intersection operations, though the traffic volumes will still exceed the capacity of the intersection.

In order to bring all movements of this intersection to an acceptable LOS for all scenarios (Existing, 2022 Base Traffic, 2022 Build Traffic, and 2022 Total Traffic) an additional through lane is needed in each direction on IL 64 along with traffic signal timing optimization. Table 15 below shows how the additional through lanes would improve the intersection operations.

Table 15
IL 64 and Peck Road
LOS & Delay by Movement for 2022 Total Traffic

Condition	Peak Hour	Overall LOS & (delay)	LOS & (delay) by Movement							
			Eastbound		Westbound		Northbound		Southbound	
			L	TR	L	TR	L	TR	L	TR
No Improvements	AM	E (69)	A (7)	E (76)	D (36)	B (15)	D (45)	F (127)	D (46)	E (62)
	PM	D (53)	C (32)	C(31)	B (18)	E (60)	E (65)	E (57)	D (48)	E (77)
With Improvements	AM	C (32)	B (12)	C (29)	B (17)	C (20)	C (34)	D (55)	C (34)	D (48)
	PM	D (35)	B (20)	C (29)	B (18)	C (32)	D (37)	D (44)	D (41)	D (54)

Table 15 shows that with traffic signal timing optimization and one additional through lane in each direction on IL 64, all movements of the intersection can operate at an acceptable LOS D or better.

The proportion of projected 2022 traffic that is due to the new development is shown in Table 16 on the following page. The overall percentage of peak period traffic that can be attributed to the proposed residential development in the Corporate Reserve site is 1.8% for the AM peak and 1.7% for the PM peak.

Table 16
IL Route 64 and Peck Road
Site Trips as Percent of Projected 2022 Total Traffic

Intersection Approach	AM Peak Hour				PM Peak Hour			
	Base	Site	Total	%	Base	Site	Total	%
Eastbound IL 64	1096	2	1098	0.2%	658	7	665	1.1%
Westbound IL 64	270	27	297	9.1%	948	15	963	1.6%
Southbound Peck Rd.	182	0	182	0%	301	0	301	0%
Northbound Peck Rd.	318	5	323	1.5%	531	20	551	3.7%
Total Intersection	1866	34	1900	1.8%	2438	42	2480	1.7%

IL Route 64 & Campton Hills Road:
This intersection is currently operating over capacity with the existing traffic volumes. The large amount of east/west traffic leaves very few gaps for northbound (eastbound Campton Hills Road) vehicles to turn on to IL 64. This intersection is expected to operate at an acceptable LOS D or better after the completion of the IL 64 & Oak Street improvement. This intersection will have the overall capacity to accommodate the 2022 Total Traffic. No changes beyond what is included in the IL 64 & Oak Street improvement are needed.

IL Route 64 & Corporate Reserve Boulevard:
With the assumption that an additional through lane in each direction on IL 64 will be added and this intersection will be signalized, this intersection has the overall capacity to accommodate the 2022 Total Traffic.

Peck Road & Woodward Drive:
This intersection has the overall capacity to accommodate the 2022 Total Traffic. No changes are needed from the existing geometrics.

Woodward Drive & Corporate Reserve Boulevard:
This intersection has the overall capacity to accommodate the 2022 Total Traffic. No changes are needed from the existing geometrics.

Woodward Drive & Cardinal Drive:
This intersection has the overall capacity to accommodate the 2022 Total Traffic. No changes are needed from the existing geometrics.

Traffic Calming:
Traffic calming measures are not anticipated to be needed on Woodward Drive. Should measures be required in the future, the City of St. Charles has a traffic calming policy in place that should be followed at that time.

On-site Traffic Circulation:
A detailed review of the site plan should be conducted by City staff and by the Fire Department to ensure that adequate access is provided for emergency vehicles throughout the site. When geometric plans for the access lanes within the site are finalized, they should be reviewed for access by the largest St. Charles Fire Department truck, which can be approximated with a WB-50 turning template.

Comparison to the Cardinal Property Traffic Impact Study:
The results of this study were compared to the Cardinal Property TIS referenced earlier in this report to see how the impacts changed when the proposed site's land use was changed from office to residential. The key difference between the original Cardinal Property TIS and this report is a modification of the proposed site plan to replace 490,000 s.f. of office space with 331 residential apartments. This results in a reduction in the volume of trips generated by the site. Table 17 below shows a comparison of the total trips generated by the Corporate Reserve and it's outlots.

Table 17
Comparison of Cardinal Property TIS and Corporate Reserve TIS
2022 Total Traffic
Total Site Trips Generated

Study	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
2008 Cardinal Property TIS	670	95	765	220	650	870
2012 Corporate Reserve TIS	194	160	354	262	323	585

Table 18 below shows a comparison between the average delays at intersections included in both studies. For the signalized intersections, the delay and LOS shown are for the intersection as a whole. For the stop-sign controlled intersection, the delay and LOS are for the critical movement.

Table 18
Comparison of Cardinal Property TIS and Corporate Reserve TIS
2022 Total Traffic
Level of Service (LOS) and Delay (seconds)

	Cardinal TIS		Corp. Reserve TIS	
Critical Movement	AM Peak	PM Peak	AM Peak	PM Peak
Peck Rd. at IL 64	F (111)	F (120)	E (69)	D (53)
Corp. Reserve Blvd. at IL 64*	A (8)	D (44)	C (21)	C (23)
Campton Hills Rd. at IL 64**	N.B. F (736)	N.B. F (***)	N.B. D (35-)	W.B. B (14)

* Analyzed as a signalized intersection
** Northbound movement represents eastbound Campton Hills Road
*** Report does not provide delay due to capacity software limits.

Table 18 shows that for most situations, the delay and LOS are improved with the new proposed residential use. The delay at IL 64 & Corporate Reserve Boulevard is increased for the AM peak hour period. This is because residential uses have a larger exiting volume in the AM than office uses. Therefore, there is a larger amount of traffic on the minor approach to this intersection, increasing the delay.

Woodward Drive Extension:
It is in the City's long range plans to extend Woodward Drive to Randall Road and construct a new signalized intersection at this location. When this happens, there will be a benefit to several of the study intersections. A majority of vehicles traveling to and from the north as well as some of the vehicles traveling to and from the south on Randall Road will utilize this new intersection. This will divert some of the traffic using Woodward Drive & Peck Road and IL 64 & Corporate Reserve Boulevard. A more detailed analysis will be required to determine the anticipated level of benefit to sites along Woodward Drive, including the Corporate Reserve.

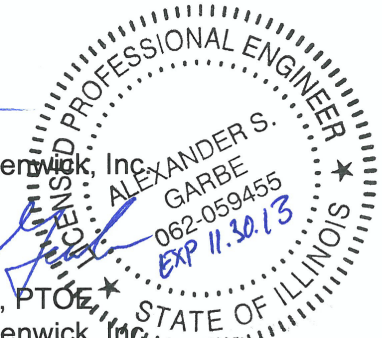
It should be noted that if this extension and new intersection are completed before the proposed Corporate Reserve development, the traffic signal warrants anticipated at IL 64 & Corporate Reserve Boulevard may be affected. If this situation occurs, it is recommended that the traffic distributions be reevaluated and a new traffic signal warrant analysis be prepared.

Respectfully Submitted,

P. Brien Funk, EI
Hampton, Lenzini and Renwick, Inc.

Alexander S. Garbe, PE, PTOE
Hampton, Lenzini and Renwick, Inc.

Diane Lukas, PE
Hampton, Lenzini and Renwick, Inc.



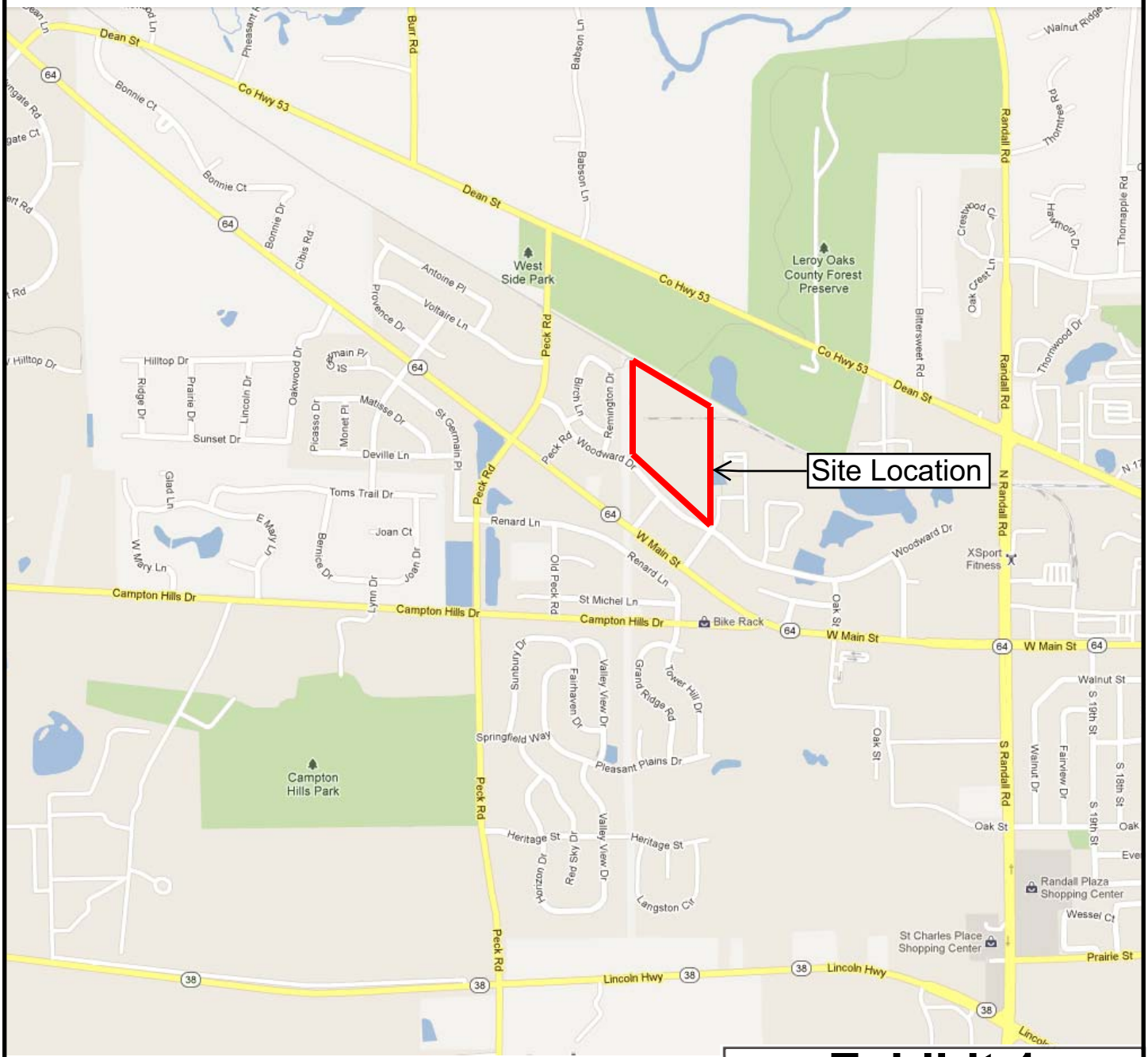


Exhibit 1

Corporate Reserve of St. Charles

Location Map

Hampton, Lenzini and Renwick, inc.
Civil & Structural Engineers . Land Surveyors . Environmental Services
ELGIN . SPRINGFIELD . ROMEOVILLE
www.hlrengineering.com

Exhibit 2

Corporate Reserve Of St. Charles

Preliminary Site Plan

Hampton, Lenzini and Renwick, inc.
Civil & Structural Engineers . Land Surveyors . Environmental Sevices
ELGIN . SPRINGFIELD . ROMEOVILLE
www.hlrengineering.com

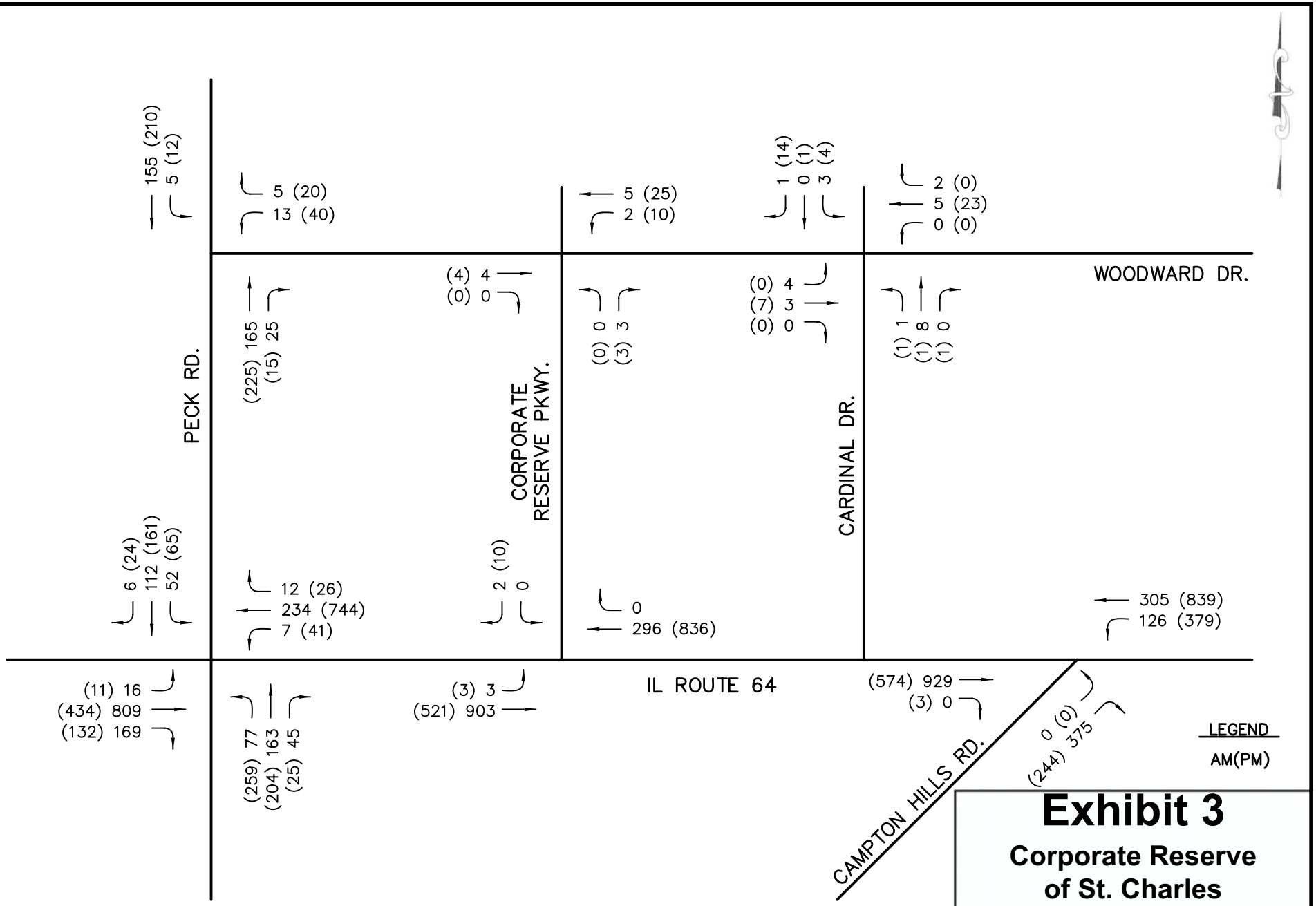


Exhibit 3

Corporate Reserve of St. Charles

Existing Traffic

Hampton, Lenzini and Renwick, inc.
Civil & Structural Engineers . Land Surveyors . Environmental Services
ELGIN . SPRINGFIELD . ROMEOVILLE
www.hlrengineering.com

P:\2012\120073\cad\phase 1\dwg\120073-TIS Exhibits.dwg
April 12, 2012

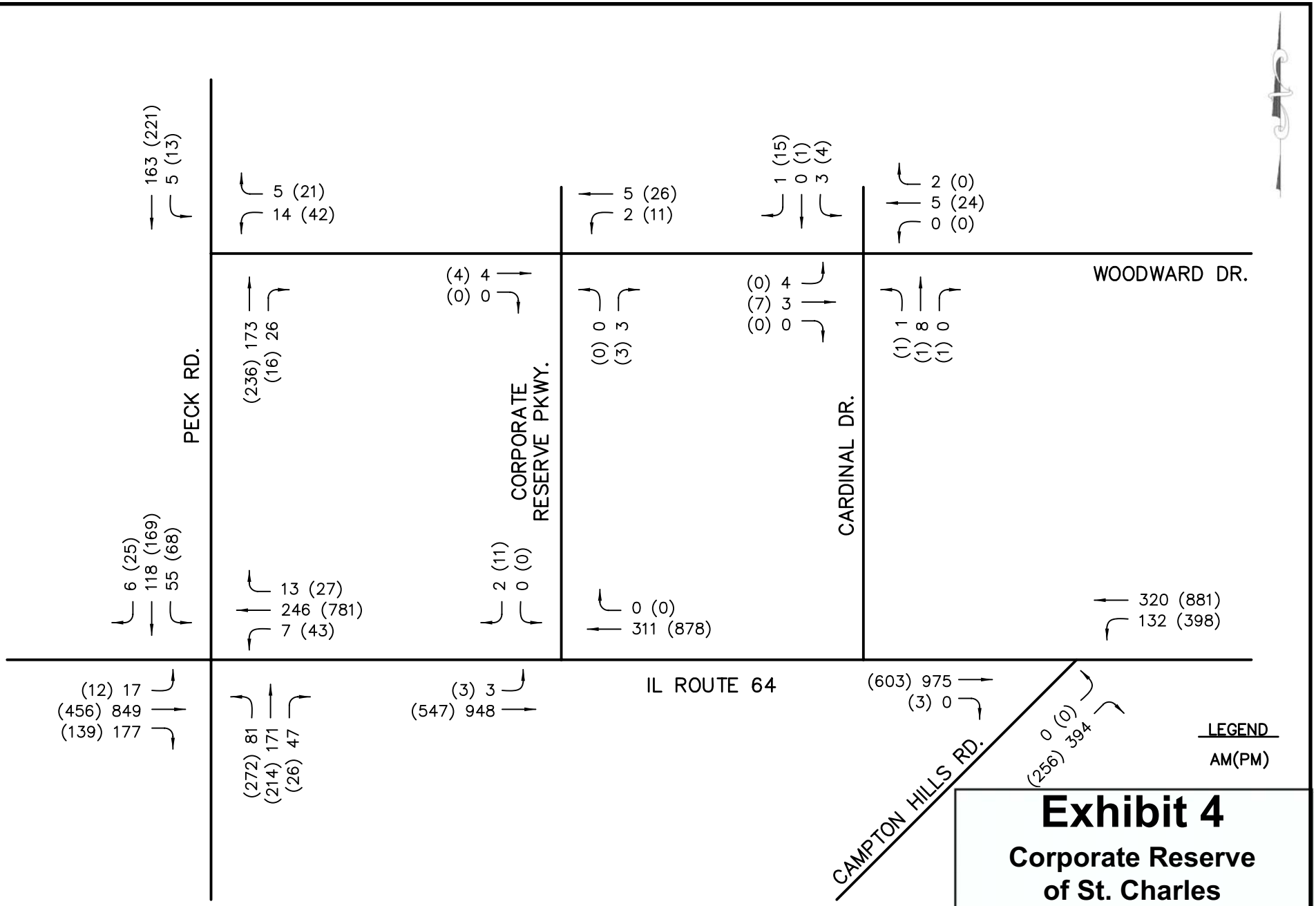


Exhibit 4

Corporate Reserve of St. Charles

2022 Base Traffic

Hampton, Lenzini and Renwick, inc.
Civil & Structural Engineers . Land Surveyors . Environmental Services
ELGIN . SPRINGFIELD . ROMEOVILLE
www.hlrengineering.com

P:\2012\120073\cad\phase 1\dwg\120073-TIS Exhibits.dwg
April 12, 2012

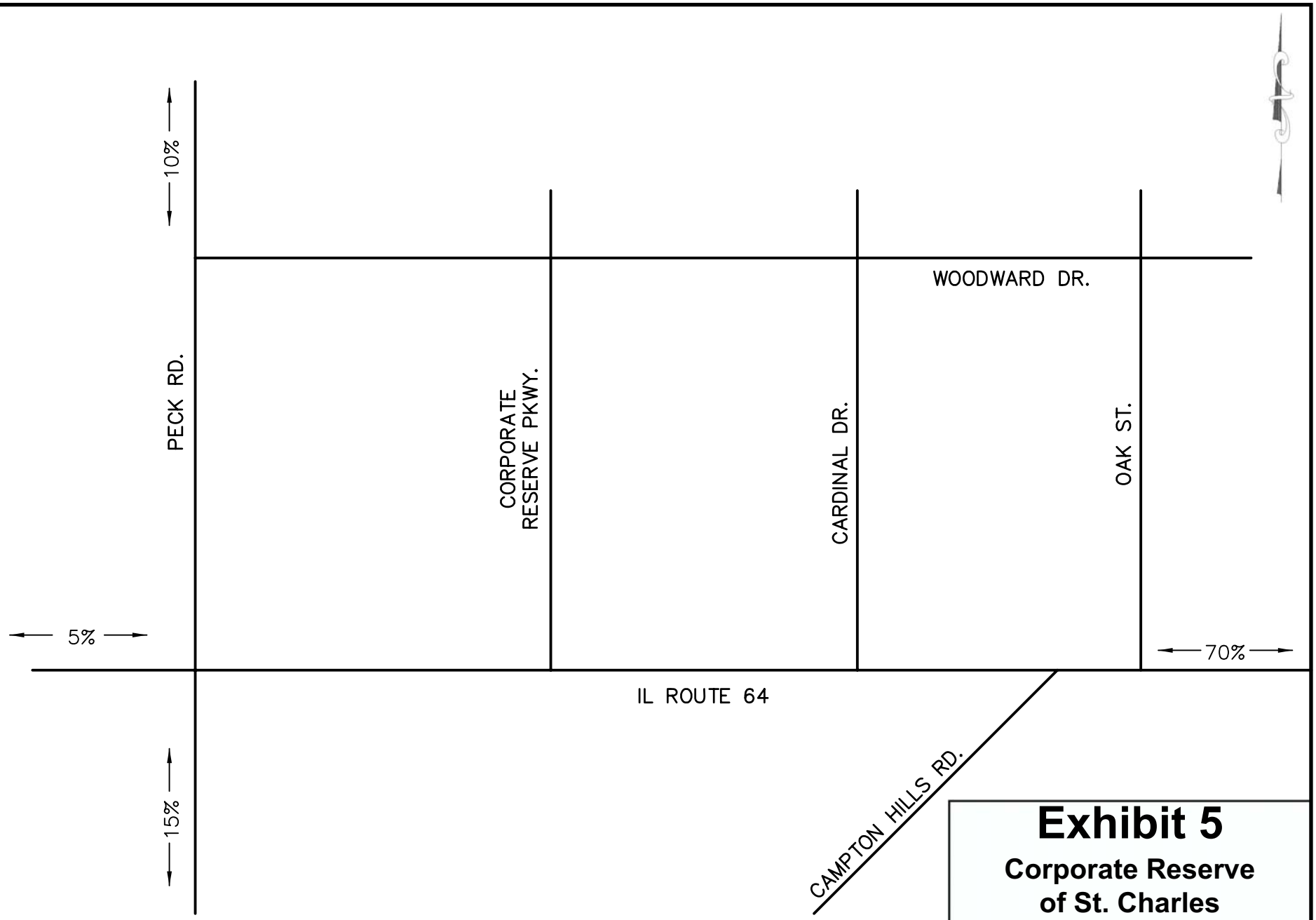


Exhibit 5

Corporate Reserve of St. Charles

Trip Distribution

Hampton, Lenzini and Renwick, inc.
Civil & Structural Engineers . Land Surveyors . Environmental Services
ELGIN . SPRINGFIELD . ROMEOVILLE
www.hlrengineering.com

P:\2012\120073\cad\phase 1\dwg\120073-TIS Exhibits.dwg
April 12, 2012

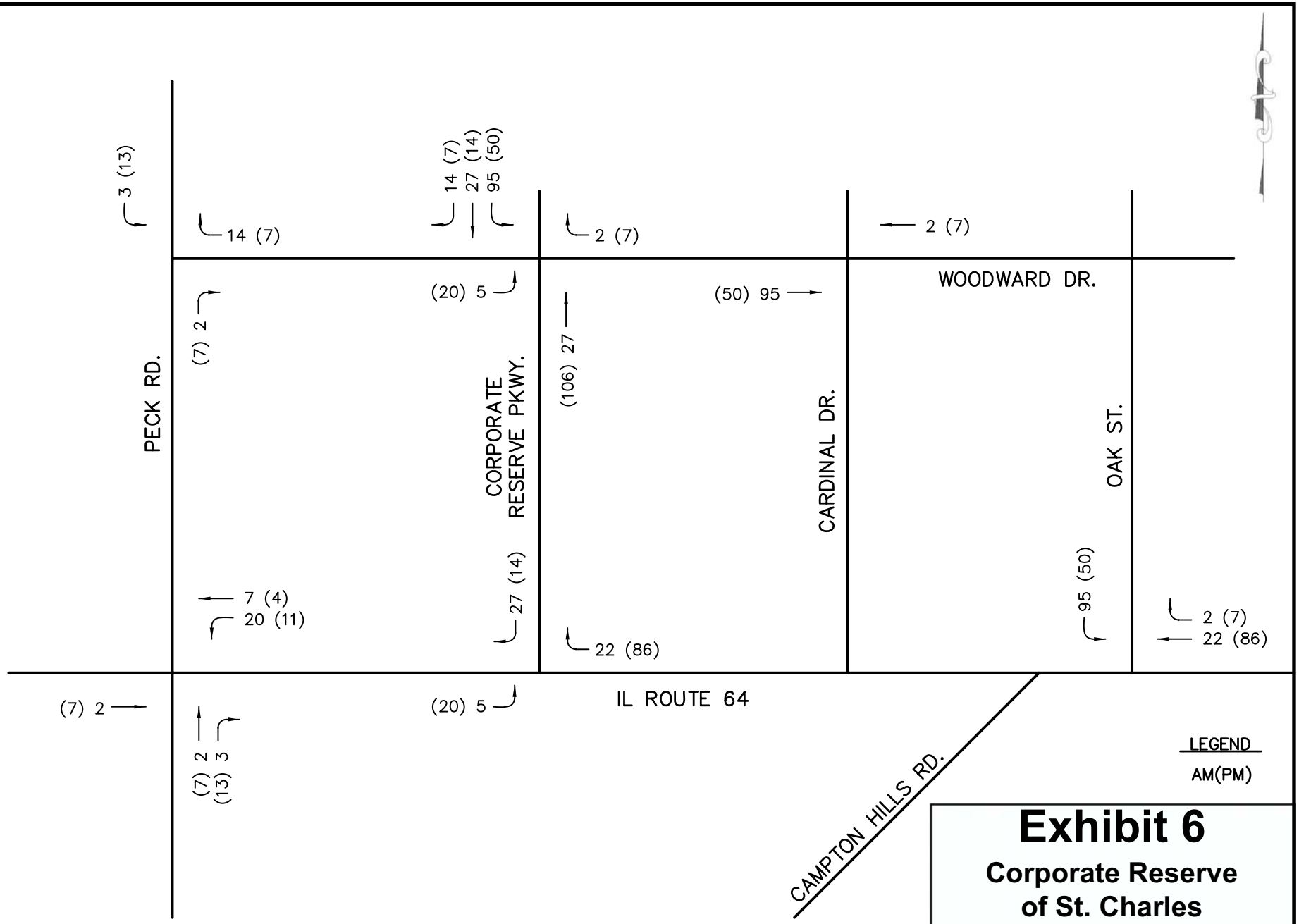


Exhibit 6

Corporate Reserve of St. Charles

Site Traffic

Hampton, Lenzini and Renwick, inc.
Civil & Structural Engineers . Land Surveyors . Environmental Services
ELGIN . SPRINGFIELD . ROMEOVILLE
www.hlrengineering.com

P:\2012\120073\cad\phase 1\dwg\120073-TIS Exhibits.dwg
April 12, 2012

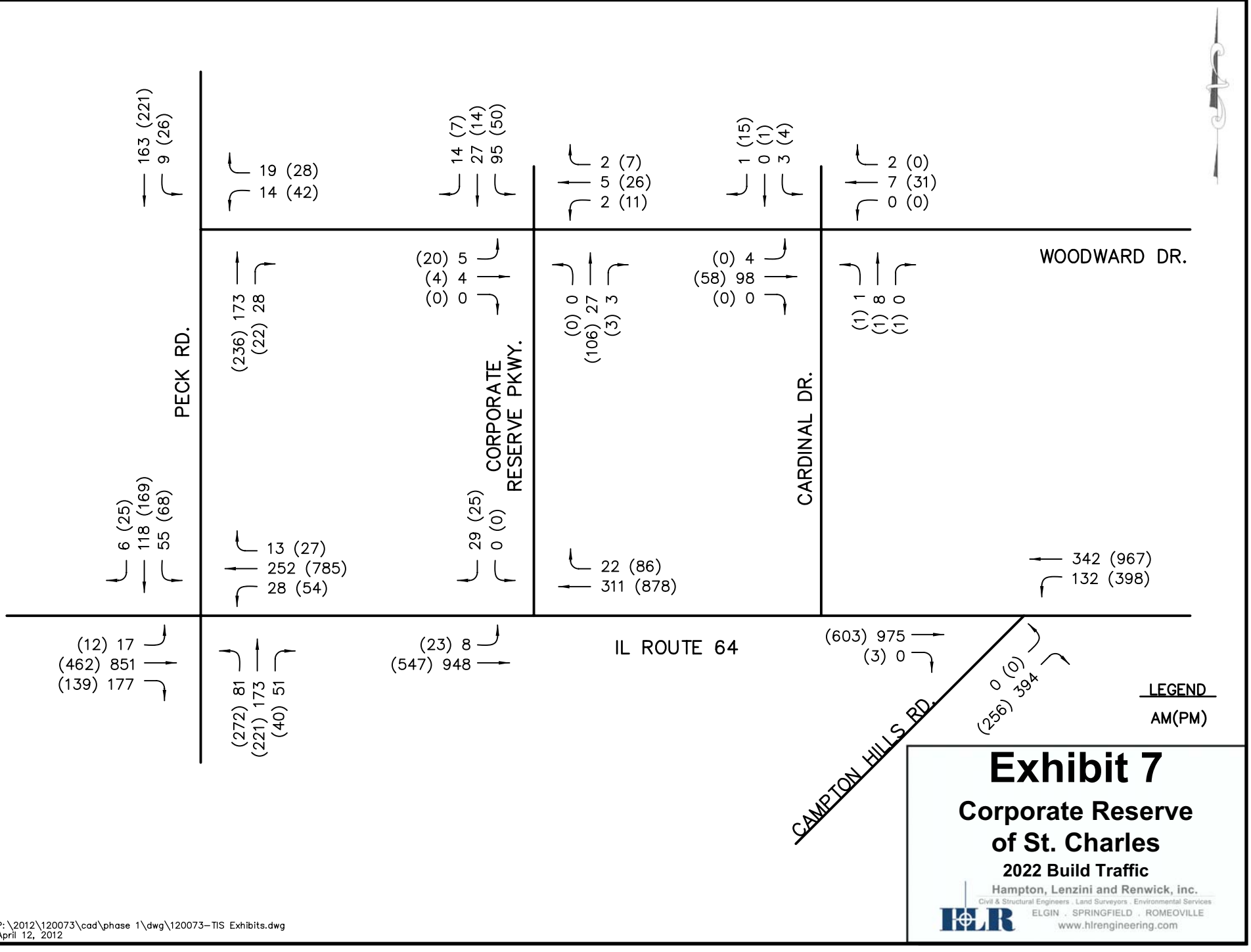


Exhibit 7

Corporate Reserve of St. Charles

2022 Build Traffic

Hampton, Lenzini and Renwick, inc.
Civil & Structural Engineers . Land Surveyors . Environmental Services
ELGIN . SPRINGFIELD . ROMEOVILLE
www.hlrengineering.com

P:\2012\120073\cad\phase 1\dwg\120073-TIS Exhibits.dwg
April 12, 2012

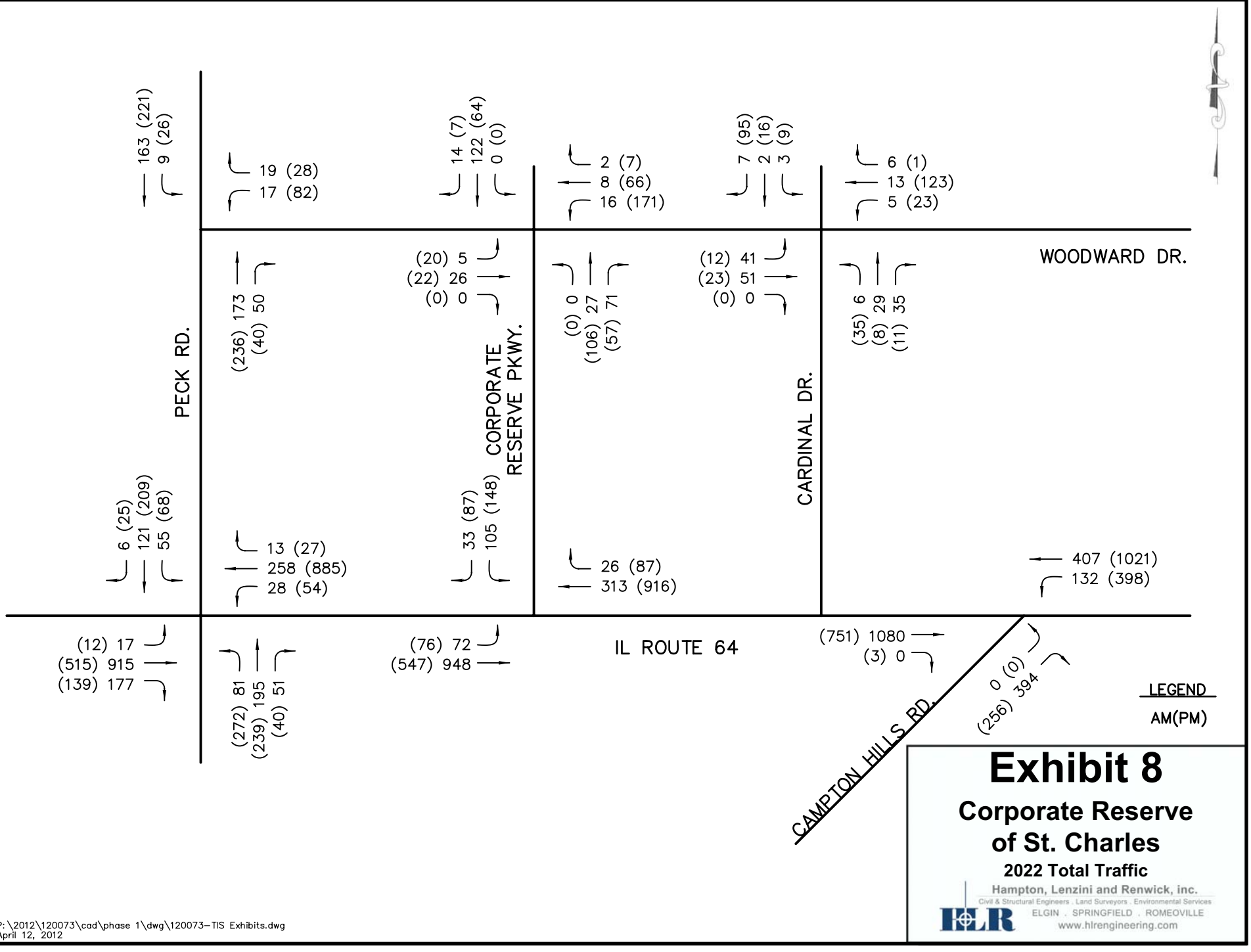


Exhibit 8

Corporate Reserve of St. Charles

2022 Total Traffic

Hampton, Lenzini and Renwick, inc.
Civil & Structural Engineers . Land Surveyors . Environmental Services
ELGIN . SPRINGFIELD . ROMEOVILLE
www.hlrengineering.com

P:\2012\120073\cad\phase 1\dwg\120073-TIS Exhibits.dwg
April 12, 2012

TRAFFIC SIGNAL WARRANT REVIEW SHEET

Intersection: IL Route 64 & Corporate Reserve Blvd **2022 Build Traffic**

Municipality: City of St. Charles/IDOT

Speed limit of major route: 45 **Isolated Community with population <10,000? No**

Number of lanes for major approach: 1 **Number of lanes for minor approach: 1**

SRA: Yes **MUTCD: 2009**

Hour	Veh. per hr. on major street (total of both approaches)	Veh. per hr. on higher volume minor street approach (one direction only)	Check any hours that meet the following warrants				
			Warrant 1 Condition A	Warrant 1 Condition B	Warrant 2	Warrant 3	Warrant 4
7:00 AM	1289	102		x			
55% of DHV	844	35					
5:00 PM	1534	64	x	x			

Volume Requirements:			
	Major Street	500	750
	Minor Street	150	100

Completed By: P. Brien Funk, EI
Hampton, Lenzini and Renwick, Inc.

Date: 5/9/2012

Warrant Number	Requirement Satisfied?
Warrant 1 Condition A Minimum Vehicular Volume	Yes **No**
Warrant 1 Condition B Interruption of Continous Traffic	Yes **No**
Warrant 2 Four Hour Volume	Not Allowed Yes No
Warrant 3 Peak Hour	Not Allowed Yes No
Warrant 4 Pedestrian Volume	Yes **No**
Warrant 5 School Crossing	Yes **No**
Warrant 6 Coordinated Signal System	Yes **No**
Warrant 7 Crash Experience	Not Evaluated Yes No
Warrant 8 Roadway Network	Yes **No**
Warrant 9 Grade Crossing	Yes **No**

ST. CHARLES
Corporate Reserve of St. Charles
Traffic Signal Warrant Review
EXHIBIT 9A

TRAFFIC SIGNAL WARRANT REVIEW SHEET

Intersection: IL Route 64 & Corporate Reserve Blvd **2022 Total Traffic**

Municipality: City of St. Charles/IDOT

Speed limit of major route: 45 **Isolated Community with population <10,000? No**

Number of lanes for major approach: 1 **Number of lanes for minor approach: 1**

SRA: Yes **MUTCD: 2009**

Hour	Veh. per hr. on major street (total of both approaches)	Veh. per hr. on higher volume minor street approach (one direction only)	Check any hours that meet the following warrants				
			Warrant 1 Condition A	Warrant 1 Condition B	Warrant 2	Warrant 3	Warrant 4
7:00 AM	1359	113	X	X			
55% of DHV	894	108		X			
5:00 PM	1626	196		x			

Volume Requirements:	Major Street	600	750
	Minor Street	150	100

Completed By: P. Brien Funk, EI
Hampton, Lenzini and Renwick, Inc.

Date: 5/9/2012

Warrant Number	Requirement Satisfied?
Warrant 1 Condition A Minimum Vehicular Volume	Yes (No)
Warrant 1 Condition B Interruption of Continous Traffic	(Yes) No
Warrant 2 Four Hour Volume	Not Allowed Yes No
Warrant 3 Peak Hour	Not Allowed Yes No
Warrant 4 Pedestrian Volume	Yes (No)
Warrant 5 School Crossing	Yes (No)
Warrant 6 Coordinated Signal System	Yes (No)
Warrant 7 Crash Experience	Not Evaluated Yes No
Warrant 8 Roadway Network	Yes (No)
Warrant 9 Grade Crossing	Yes (No)

ST. CHARLES
Corporate Reserve of St. Charles
Traffic Signal Warrant Review
EXHIBIT 9B

Corporate Reserve of St. Charles

Sanitary Sewer Evaluation

Performed for

The City of St. Charles, Illinois

ST. CHARLES
SINCE 1834

Performed by

Wills Burke Kelsey Associates, Ltd.

WBK

April 24, 2012

INTRODUCTION

On behalf of JCF Real Estate and the City of St. Charles, Wills Burke Kelsey Associates, Ltd. (WBK) has evaluated the impacts of the proposed land use change within the Corporate Reserve of St. Charles project. Impact evaluation is related to the City of St. Charles wastewater collection system. The Corporate Reserve site is located in St. Charles west of Randall Road and north of IL Route 64, near the intersection of Woodward Drive and Corporate Reserve Boulevard. Original development concepts anticipate primarily office use with some commercial use along IL 64. Two single story office buildings have been constructed and a site prepared for a third. JCF is proposing to change a majority of land use from office to high density residential. Based on a Concept Site Plan submitted by JCF Real Estate on March 21, 2012, the proposed development consists of 331 rental units and a club area on approximately twenty acres. JCF Real Estate is interested in connecting to the City of St. Charles wastewater collection system and receiving wastewater treatment service from the City of St. Charles West Side Wastewater Treatment Plant. This report considers existing conditions of the sanitary sewer which includes the potential for future development to be serviced by the existing sanitary system, and assesses the impact to the sanitary sewer as a result of land use changes and increased flows from the proposed Corporate Reserve development.

SCOPE OF EVALUATION

The system components to be evaluated as part of this study include three sanitary sewer pipe networks and the Renaux Manor Lift Station. If it is found that these components can facilitate flows and are within the original design capacities, future evaluation of downstream force main and gravity sewer is not warranted.

The first pipe network is the trunk sanitary sewer that extends from the Renaux Manor Lift Station (just east of the intersection of Peck Road and Campton Hills Road), north along Peck Road to Voltaire Lane. The second pipe network is the existing collection system along Woodward Drive, which begins along Cardinal Drive, flows west along Woodward Drive, and into the Peck Road trunk sewer. A connection into this system from the Corporate Reserve improvements is proposed along Cardinal Drive. The third sanitary sewer pipe network is within the Remington Glen subdivision. This system is tributary to the Woodward Drive collection system and a connection into this system from the Corporate Reserve development is also proposed. This portion of the City's wastewater collection system includes pipe ranging in size from 8 inches to 15 inches in diameter.

All three sanitary sewer systems were evaluated utilizing a simplified approach considering flowing full capacity based on manning's equation. Two different wet weather flow regimes were considered; with and without proposed flows from Corporate Reserve. Conservatively,

we did not evaluate dry weather flows because wet weather conditions will be most critical and the "minimum" flow condition that the system must be able to handle. A spreadsheet was developed to determine the capacity of representative pipe segments in the network and tributary flows to each segment. In addition to existing sites tributary to the system, future development bound by Woodward Drive and IL Route 64 was identified and considered in the evaluation. The collection system to be evaluation also includes the lift station at Renaux Manor. The Renaux Manor Lift Station was initially evaluated based on a comparison of existing and projected flows to the original design flows and calculations. Additionally, pump run time provided by the City of St. Charles was reviewed and compared to flow estimates.

PIPE CAPACITY ANALYSIS

The first component of the evaluation was to determine the capacity of the existing pipe network. All areas tributary to the collection system were identified and considered. Sanitary sewers pipes range in size from 8 to 15 inches in diameter and all sewers were constructed with relatively new subdivisions and commercial developments that were built starting in the mid 1990's. The pipe slopes, sizes, lengths, rim elevations, and invert elevations utilized in the analysis were determined from the following sources:

- Remington Glen Record Drawings, prepared by Cowhey Gudmundson Leder, Ltd., dated 09/20/05
- Record Plans for Final Engineering Renaux Manor and the Towns of Renaux Manor Unit 1, prepared by Wiseman-Hughes Enterprises, dated 08/18/99
- Record Drawings Grading Improvements – Phase II The Corporate Reserve of St. Charles, prepared by Mackie Consultants LLC, dated 03-29-11
- City of St. Charles GIS Data, provided by the City of St. Charles
- Renaux Manor Sanitary Sewer Mains, Lift Station, and Force Main Record Drawings, prepared by Intech Consultants, INC., dated 4/21/97

Detailed sanitary sewer information for all three pipe networks is located on Exhibit 1 in the Appendix.

Design Flow Determination for Capacity Analysis

A capacity analysis was performed for all three sanitary sewer pipe networks. Two wet weather conditions flow regimes were considered:

- Existing (without Corporate Reserve development); and
- Proposed (with Corporate Reserve development)

It should be noted the "Existing" flow regime includes all existing conditions as well as undeveloped parcels which will be served by the system under evaluation. All lots tributary to each network were included and flows were input at select manholes. Inflow and infiltration was added at the upstream manhole of all pipe networks at 500 gal/in/mi/day. Supporting calculations can be found in the Appendix.

Remington Glen subdivision is serviced by a sanitary sewer pipe network with pipe sizes ranging from 8 to 12 inches in diameter. Based on the approved Illinois Environmental Protection Agency (IEPA) Water Pollution Control Permit, a total of 26 multiple dwelling units were estimated to generate a total of 36,050 gallons per day (gpd).

The existing collection system that runs along Cardinal Drive, and extends west along Woodward Drive before connecting to the Peck Road trunk system was evaluated based on the existing development serviced by the system and potential future development on the three vacant lots bound by IL Route 64 to the south and Woodward Drive to the north. Existing development tributary to the system includes office buildings at Corporate Reserve, Main Street Center, Autumn Leaves Assisted Living, and Remington Glen subdivision. Approved IEPA Water Pollution Control permits yielded an average daily flow rate of 6,000 gpd and 3,200 gpd at the assisted living facility and Main Street Center, respectively. Wastewater flows for the Corporate Reserve office buildings were estimated based on a wastewater generation rate of 15 gpd/employee. The number of employees was calculated based on one employee per 250 square feet of office space. Future wastewater generation rates for the three vacant lots were conservatively calculated using a population equivalent (PE) of 20 per acre of land.

Land uses tributary to the trunk system along Peck Road include single family homes (Renaux Manor Unit 1, Renaux Manor Unit 3 and Artesian Springs), multi-family homes (Renaux Manor Unit 2), and commercial space (Valley Springs Auto, Westgate, and Walgreens). Approved IEPA Water Pollution Control permits for Valley Springs Auto, Westgate, and Walgreens were used to estimate the respective wastewater flows. Flows for the single and multi-family homes were estimated using the IEPA waterwater average daily flow generation rates. For single family homes, a rate of 350 gallons/household/day was used. For multi-family homes, all units were conservatively estimated to be 3 bedroom units with a rate of 300 gallons/unit/day. A total of 152 households in Renaux Manor Unit 1 and Artesian Springs are tributary to the system. 117 single family homes in Renaux Manor Unit 3 are also tributary to the system, in addition to the 29 multi-family homes in Renaux Manor Unit 2.

The Renaux Manor Lift Station receives flow from the sanitary sewer trunk line along Peck Road, which is the collector for both the sanitary sewer system that serves the Remington Glen subdivision and the system along Woodward Drive. The lift station also accepts wastewater flow from tributary land uses to the east. These tributary areas include 35 multi-family units

from Renaux Manor Unit 2, Pine Ridge and Regency Estates (includes Aldi), The Bike Rack & adjacent commercial, the assisted living facility and St. Charles Fire Station No. 3. As mentioned above, wastewater generation rates were estimated at 300 gallons/unit/day for the multi-family units. The approved IEPA rate for Pine Ridge and Regency Estates was used, and flow rates for The Bike Rack & adjacent commercial, and the fire station were based on one employee for every 250 square feet of building, with an average daily use of 15 gpd/employee.

Based on the average daily flow, a peaking factor was calculated and applied in accordance with The Ten State Standards. The existing peak wet weather sanitary flow tributary to the Renaux Manor Lift Station is 1.155 cfs. The capacity analysis and peaking factor calculations for each manhole are shown in the Appendix on Exhibits 2 and 3 following this report. An exhibit showing the entire Renaux Manor Lift Station service area is also provided in Appendix A as Drawing OV1.

Results of Capacity Analysis

Based on the results of the capacity analysis, the pipe network can handle the existing condition wet weather flows. The existing conditions wet weather pipe capacity utilization ranges from 1% to 41% flowing full. Please note, our peak flow assumptions are conservative because all future development estimated at 20 PE per acre.

Next we looked at adding flows from the proposed land use changes at Corporate Reserve. Land use for the proposed development includes 15 buildings with a total of 331 rental units ranging from studios to two bedroom apartments. The percentage of studios, one bedroom, and two bedroom apartments in each building was estimated as shown on Exhibit 4 in the Appendix. Based on the calculated percentages, it was estimated that the average building includes 1 studio, 11 one bedroom apartments, and 10 two bedroom apartments. Using the IEPA waterwater average daily flow generation rates, a value of 4750 gpd was calculated for each building. This calculation can be found in Appendix A.

Based on the Preliminary Utility Plan for Corporate Reserve of St. Charles Phase II prepared by Mackie Consultants on 03-09-12, sanitary sewer is proposed to enter the existing pipe network in two locations. The collection system for Remington Glen will accept 0.375 cfs of additional peak flow from 20 buildings at manhole 6.4062. The remaining 0.062 cfs from 2 buildings will discharge into manhole 6.3194 along Cardinal Drive. After including flow from these additional 22 multi-family homes, the pipe utilization for the proposed condition wet weather flow is estimated to range from 1% to 58% flowing full. The proposed capacity analysis and peaking factor calculations for tributary flows into each manhole are shown in the Appendix on Exhibits 5 and 6 following this report. The Preliminary Utility Plan is also in the Appendix and labeled as Exhibit 7.

It is our opinion that the existing system can convey the proposed condition wet weather flows.

RENAUX MANOR LIFT STATION EVALUATION

The second component of the evaluation was to determine the capacity of the Renaux Manor Lift Station. All tributary areas to the Renaux Manor Lift Station were identified and considered. Design flow rate calculations and rates were taken from *"The Renaux Manor Pump Station Calculations,"* prepared by Wiseman-Hughes Enterprises, revised March 16, 1998.

Per the calculations prepared by Wiseman-Hughes Enterprises, the Renaux Manor Lift Station is designed for an average daily flow of 400,000 gallons per day. The associated Renaux Manor Lift Station Calculations are provided in the Appendix as Exhibit 8. Based on a survey conducted by WBK with City of St. Charles Staff, there are no major operational problems associated with the lift station that suggest it cannot handle the existing flow. There are also no indicators that the lift station will not be able to handle an increased flow, as long as its design peak flow capacity is not exceeded.

WBK estimated the existing average daily flow prior to the connection of the proposed improvements at Corporate Reserve to be 316,723 gallons per day. Including proposed improvements at Corporate Reserve would add an additional average daily flow of 71,250 gallons per day, totaling 387,973 gallons per day. A breakdown of the calculated average daily flow rates are on Exhibit 9 in the Appendix. Therefore, since the total estimated average daily flow is less than the average design daily flow, no improvements are necessary.

Furthermore, based on pump run time data from the City, the average pump run time is 1.2 hours a day for the months of January 2012 to March 2012. This equates to an average daily flow of 99,360 gpd which is significantly less than our estimate average daily flow in the proposed condition of 316,723 gpd. Additionally, peak run time from the data is 3.7 hours a day, which equates to a flow of 306,360 gpd. Therefore, since the real time peak run time is also less than the estimate average daily flow in the proposed condition, it is our opinion that the lift station will be able to handle the additional flow.

Further, average daily flow for the existing conditions in addition to the proposed project are less than the design average daily flow at the Renaux Manor Lift Station. An email survey was also conducted by WBK with the City of St. Charles staff to determine operational condition and concerns. Results of the survey indicated that there are no major operational problems with the Renaux Manor lift station (aside from inoperable VFD's that are determined unnecessary, a panel view screen, and control circuit board memory backup battery holder that is loose). In regards to the sanitary sewer system, there are no known trouble spots in the existing collection system, nor are there any issues with the force main along Peck Road.

SUMMARY AND RECOMMENDATIONS

Based on our evaluation, the proposed land use changes in Corporate Reserve can be facilitated by the existing wastewater collection system as shown on the Preliminary Utility Plan submitted by Mackie Consultants on 3/09/12. A conservative approach was made by WBK to analyze the existing pipe system by including future development on vacant lots and estimating flows for unoccupied buildings that are currently connected to the collection system. Adding projected sanitary sewer flows into the existing system will increase the flow, however; in the fullest pipe will still have over 40% capacity available. Therefore, no improvements are necessary.

Since there are no known operational issues with the lift station to date and it has not reached its maximum operational capacity, WBK believes the Renaux Manor Lift Station will be able to handle the additional waterwater flow generated from the proposed land use change at Corporate Reserve.

EXHIBIT 1

Sanitary Sewer - Corporate Reserve to Peck Road

Upstream Manhole	Downstream Manhole	Upstream Manhole Rim	Downstream Manhole Rim	Upstream Invert	DownStream Invert	Pipe Size	Pipe Length	Pipe Slope	Depth	Type
6.3196	6.3198	768.29	768.98	766.10	764.10	8	122	1.64%	3.19	PVC
6.3198	6.3194	768.98	782.82	764.10	762.68	8	329	0.43%	4.88	PVC
6.3194	6.3193	782.82	784.57	762.68	761.87	8	188	0.43%	20.14	PVC
6.3193	6.3189	784.57	784.29	761.87	761.45	8	66	0.64%	22.50	PVC
6.3189	6.3188	784.29	780.48	761.45	761.06	8	129	0.30%	22.84	PVC
6.3188	6.3192	780.48	775.61	761.06	759.49	8	178	0.47%	19.42	PVC
6.3192	6.3190	775.61	772.68	759.49	758.74	8	188	0.40%	16.12	PVC
6.3190	6.3191	772.68	772.98	758.74	758.27	8	95	0.49%	13.94	PVC
6.3191	6.3200	772.98	768.30	758.27	756.90	8	309	0.44%	14.71	PVC
6.3200	6.3105	768.39	766.68	756.90	755.81	8	153	0.71%	11.49	T
6.3105	6.3104	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.38%	10.40	T
6.3104	6.3103	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.13%	10.66	T
6.3103	7.3089	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.21%	10.38	T
7.3089	7.3088	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.95%	10.44	T
7.3088	7.3087	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.83%	9.80	T
7.3087	7.3086	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.95%	10.98	T
7.3086	7.3085	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.30%	10.43	T
7.3085	7.3084	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.17%	11.00	T
7.3084	7.3083	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.60%	13.72	T
7.3083	7.3082	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.41%	17.06	T
7.3082	7.3081	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.38%	15.14	T
7.3081	7.3080	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.51%	14.50	T

Sanitary Sewer - Peck Road to Renaux Manor Lift Station

Upstream Manhole	Downstream Manhole	Upstream Manhole Rim	Downstream Manhole Rim	Upstream Invert	DownStream Invert	Pipe Size	Pipe Length	Pipe Slope	Depth	Type
7.4051	7.4050	745.75	[illegible]	735.98	733.79	8	307	0.39%	9.77	PVC
7.4050	7.3080	[illegible]	[illegible]	729.47	[illegible]	15	198	0.30%	17.44	PVC
7.3080	7.3034	[illegible]	744.28	[illegible]	[illegible]	15	242	0.22%	19.05	PVC
7.3034	7.3033	744.28	743.97	724.84	723.47	15	401	0.34%	19.44	PVC
7.3033	7.3032	743.97	739.01	723.47	722.83	15	322	0.19%	20.50	
7.3032	7.3031	739.01	739.56	722.83	722.33	15	281	0.17%	16.73	
7.3031	7.3018	739.56	740.79	722.40	721.98	15	207	0.16%	17.50	
7.3018	7.3017	740.79	733.14	721.99	721.43	15	202	0.20%	18.80	
7.3017	7.3016	739.14	733.44	721.47	720.88	15	295	0.15%	17.72	
7.3016	7.3015	739.44	733.01	720.88	720.33	15	290	0.19%	18.56	
7.3015	7.3053	739.61	740.51	720.33	719.44	15	312	0.29%	19.28	

Sanitary Sewer - Remington Glen system into MH 7.3083 along Woodward Drive

Upstream Manhole	Downstream Manhole	Upstream Manhole Rim	Downstream Manhole Rim	Upstream Invert	DownStream Invert	Pipe Size	Pipe Length	Pipe Slope	Depth	Type
6.3110	6.3109	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.08%	9.46	
6.3109	6.3108	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.10%	8.52	
6.3108	6.3107	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.40%	9.88	
6.3107	6.3106	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.50%	8.15	
6.3106	6.4063	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.94%	8.56	
6.4063	6.4062	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.93%	8.90	
6.4062	7.4049	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.22%	15.45	
7.4049	7.4048	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.38%	14.70	
7.4048	7.4047	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.37%	14.03	
7.4047	7.4046	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.31%	13.26	
7.4046	7.4045	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.33%	15.46	
7.4045	7.3094	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.24%	17.43	
7.3094	7.3090	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.45%	18.94	
7.3093	7.3092	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.97%	9.60	
7.3092	7.3091	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.85%	9.60	
7.3091	7.3090	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.49%	12.13	
7.3090	7.3083	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.46%	20.80	

Green = City of St. Charles GIS
Red = Remington Glen Record Drawings for Sanitary Sewer, Storm Sewer, & Watermain, Datum = NAVD 88
Yellow = Corporate Reserve Phase II plans, Datum = NAVD 88
Purple = Renaux Manor Sanitary Sewer Mains, Lift Station, and Force Main Record Drawings dated 4/21/97, Datum = NGVD 1929, converted to NAVD 88 (1929 ELEV - 0.13)

EXISTING CONDITIONS CAPACITY ANALYSIS - CORPORATE RESERVE TO PECK ROAD

Upstream Manhole	Downstream Manhole	Upstream Elevation	Downstream Elevation	Pipe Length	Pipe Diameter	Pipe Slope	Pipe Capacity (CFS)	Cummulative Peak Sanitary Flow (CFS)	Total I & I (CFS)	Cummulative Wet Weather Flow (CFS)	Pipe Capacity (%)
6.3196	6.3198	766.10	764.10	122	8	1.64%	1.551	0.007	0.00360	0.011	0.7
6.3198	6.3194	764.10	762.68	329	8	0.43%	0.796	0.014	0.00360	0.018	2.2
6.3194	6.3193	762.68	761.87	188	8	0.43%	0.795	0.025	0.00360	0.028	3.5
6.3193	6.3189	761.87	761.45	66	8	0.64%	0.967	0.025	0.00360	0.028	2.9
6.3189	6.3188	761.45	761.06	129	8	0.30%	0.666	0.067	0.00360	0.071	10.6
6.3188	6.3192	761.06	759.49	378	8	0.42%	0.781	0.067	0.00360	0.071	9.1
6.3192	6.3190	759.49	758.74	188	8	0.40%	0.765	0.120	0.00360	0.124	16.2
6.3190	6.3191	758.74	758.27	95	8	0.49%	0.852	0.120	0.00360	0.124	14.5
6.3191	6.3200	758.27	756.90	309	8	0.44%	0.807	0.120	0.00360	0.124	15.3
6.3200	6.3105	756.90	755.81	153	8	0.71%	1.023	0.120	0.00360	0.124	12.1
6.3105	6.3104	755.95	754.16	53	8	3.38%	2.227	0.144	0.00360	0.148	6.6
6.3104	6.3103	754.16	752.19	63	8	3.13%	2.143	0.144	0.00360	0.148	6.9
6.3103	7.3089	752.19	748.53	114	8	3.21%	2.171	0.144	0.00360	0.148	6.8
7.3089	7.3088	748.53	746.70	94	8	1.95%	1.691	0.144	0.00360	0.148	8.8
7.3088	7.3087	746.70	745.11	87	8	1.83%	1.638	0.144	0.00360	0.148	9.0
7.3087	7.3086	745.11	742.24	147	8	1.95%	1.693	0.164	0.00360	0.168	9.9
7.3086	7.3085	742.24	740.40	80	8	2.30%	1.838	0.164	0.00360	0.168	9.1
7.3085	7.3084	740.40	736.98	82	8	4.17%	2.475	0.164	0.00360	0.168	6.8
7.3084	7.3083	736.98	731.72	114	8	4.61%	2.603	0.164	0.00360	0.168	6.4
7.3083	7.3082	731.72	731.15	69	12	0.83%	3.247	0.376	0.00590	0.382	11.8
7.3082	7.3081	731.15	730.77	99	12	0.38%	2.213	0.376	0.00590	0.382	17.2
7.3081	7.3080	730.77	730.20	112	12	0.51%	2.549	0.410	0.00590	0.416	16.3

EXISTING CONDITIONS CAPACITY ANALYSIS - REMINGTON GLEN SYSTEM INTO MH 7.3083 ALONG WOODWARD DRIVE

Upstream Manhole	Downstream Manhole	Upstream Elevation	Downstream Elevation	Pipe Length	Pipe Diameter	Pipe Slope	Pipe Capacity (CFS)	Cummulative Peak Sanitary Flow (CFS)	Total I & I (CFS)	Cummulative Wet Weather Flow (CFS)	Pipe Capacity (%)
6.3110	6.3109	748.79	747.56	114	8	1.08%	1.259	0.226	0.00230	0.228	18.1
6.3109	6.3108	747.56	746.07	125	8	1.19%	1.323	0.226	0.00230	0.228	17.2
6.3108	6.3107	746.07	745.57	126	8	0.40%	0.763	0.226	0.00230	0.228	29.8
6.3107	6.3106	745.57	742.99	162	8	1.59%	1.529	0.226	0.00230	0.228	14.9
6.3106	6.4063	742.99	741.70	137	8	0.94%	1.176	0.226	0.00230	0.228	19.4
6.4063	6.4062	741.70	740.50	129	8	0.93%	1.169	0.226	0.00230	0.228	19.5
6.4062	7.4049	735.18	734.99	87	12	0.22%	1.669	0.226	0.00230	0.228	13.6
7.4049	7.4048	734.99	734.30	180	12	0.38%	2.212	0.226	0.00230	0.228	10.3
7.4048	7.4047	734.30	734.14	43	12	0.37%	2.179	0.226	0.00230	0.228	10.5
7.4047	7.4046	734.14	733.62	167	12	0.31%	1.993	0.226	0.00230	0.228	11.4
7.4046	7.4045	733.62	733.02	184	12	0.33%	2.040	0.226	0.00230	0.228	11.2
7.4045	7.3094	733.02	732.75	114	12	0.24%	1.739	0.226	0.00230	0.228	13.1
7.3094	7.3090	732.75	732.16	132	12	0.45%	2.388	0.226	0.00230	0.228	9.5
7.3093	7.3092	746.22	745.07	118	8	0.97%	1.196	0.226	0.00230	0.228	19.0
7.3092	7.3091	745.07	740.60	116	8	3.85%	2.379	0.226	0.00230	0.228	9.6
7.3091	7.3090	740.60	737.63	85	8	3.49%	2.265	0.226	0.00230	0.228	10.1
7.3090	7.3083	737.63	731.72	202	12	2.93%	6.111	0.226	0.00230	0.228	3.7

EXISTING CONDITIONS CAPACITY ANALYSIS - PECK ROAD INTO RENAUX MANOR LIFT STATION

Upstream Manhole	Downstream Manhole	Upstream Elevation	Downstream Elevation	Pipe Length	Pipe Diameter	Pipe Slope	Pipe Capacity (CFS)	Cummulative Peak Sanitary Flow (CFS)	Total I & I (CFS)	Cummulative Wet Weather Flow (CFS)	Pipe Capacity (%)
7.4002	7.4050	730.98	729.79	307	8	0.39%	0.754	0.255	0.00890	0.263	34.9
7.4050	7.3080	725.47	725.15	108	15	0.30%	3.526	0.255	0.00890	0.263	7.5
7.3080	7.3034	725.15	724.84	142	15	0.22%	3.026	0.636	0.01480	0.651	21.5
7.3034	7.3033	724.84	723.47	401	15	0.34%	3.786	0.636	0.01480	0.651	17.2
7.3033	7.3032	723.47	722.89	320	15	0.18%	2.758	0.636	0.01480	0.651	23.6
7.3032	7.3031	722.89	722.40	281	15	0.17%	2.705	0.671	0.01480	0.686	25.3
7.3031	7.3018	722.40	721.99	257	15	0.16%	2.587	0.671	0.01480	0.686	26.5
7.3018	7.3017	721.99	721.42	292	15	0.20%	2.862	1.126	0.02910	1.155	40.4
7.3017	7.3016	721.42	720.88	291	15	0.19%	2.790	1.126	0.02910	1.155	41.4
7.3016	7.3015	720.88	720.33	290	15	0.19%	2.821	1.126	0.02910	1.155	41.0
7.3015	7.3053	720.33	719.44	312	15	0.29%	3.459	1.126	0.02910	1.155	33.4

EXISTING PEAK FLOW CALCULATIONS
EXHIBIT 3

Manhole 6.3196 Sanitary Sewer Peak Flow	
PE	10
Peaking Factor	4.41
Peak Flow (Million Gallons Per Day)	**0.005**
Peak Flow (Gallons Per Day)	**4613**
Flow (Gallons Per Minute)	3
Flow (CFS)	0.007

Manhole 6.3198 Sanitary Sewer Peak Flow	
PE	21
Peaking Factor	4.38
Peak Flow (Million Gallons Per Day)	**0.009**
Peak Flow (Gallons Per Day)	**9154**
Flow (Gallons Per Minute)	6
Flow (CFS)	0.014

Manhole 6.3194 Sanitary Sewer Peak Flow	
PE	37
Peaking Factor	4.34
Peak Flow (Million Gallons Per Day)	**0.016**
Peak Flow (Gallons Per Day)	**15881**
Flow (Gallons Per Minute)	11
Flow (CFS)	0.025

Manhole 6.3189 Sanitary Sewer Peak Flow	
PE	103
Peaking Factor	4.24
Peak Flow (Million Gallons Per Day)	**0.044**
Peak Flow (Gallons Per Day)	**43504**
Flow (Gallons Per Minute)	30
Flow (CFS)	0.067

EXISTING PEAK FLOW CALCULATIONS
EXHIBIT 3

Manhole 6.3192 Sanitary Sewer Peak Flow	
PE	187
Peaking Factor	4.16
Peak Flow (Million Gallons Per Day)	**0.078**
Peak Flow (Gallons Per Day)	**77601**
Flow (Gallons Per Minute)	54
Flow (CFS)	0.120

Manhole 6.3105 Sanitary Sewer Peak Flow	
PE	226
Peaking Factor	4.13
Peak Flow (Million Gallons Per Day)	**0.093**
Peak Flow (Gallons Per Day)	**93373**
Flow (Gallons Per Minute)	65
Flow (CFS)	0.144

Manhole 7.3087 Sanitary Sewer Peak Flow	
PE	258
Peaking Factor	4.11
Peak Flow (Million Gallons Per Day)	**0.106**
Peak Flow (Gallons Per Day)	**106000**
Flow (Gallons Per Minute)	74
Flow (CFS)	0.164

Manhole 7.3083 Sanitary Sewer Peak Flow	
PE	619
Peaking Factor	3.92
Peak Flow (Million Gallons Per Day)	**0.243**
Peak Flow (Gallons Per Day)	**242827**
Flow (Gallons Per Minute)	169
Flow (CFS)	0.376

EXISTING PEAK FLOW CALCULATIONS
EXHIBIT 3

Manhole 7.3081 Sanitary Sewer Peak Flow	
PE	679
Peaking Factor	3.90
Peak Flow (Million Gallons Per Day)	**0.265**
Peak Flow (Gallons Per Day)	**264843**
Flow (Gallons Per Minute)	184
Flow (CFS)	0.410

Manhole 7.3080 Sanitary Sewer Peak Flow	
PE	1,088
Peaking Factor	3.78
Peak Flow (Million Gallons Per Day)	**0.411**
Peak Flow (Gallons Per Day)	**410905**
Flow (Gallons Per Minute)	285
Flow (CFS)	0.636

Manhole 7.3032 Sanitary Sewer Peak Flow	
PE	1,153
Peaking Factor	3.76
Peak Flow (Million Gallons Per Day)	**0.433**
Peak Flow (Gallons Per Day)	**433494**
Flow (Gallons Per Minute)	301
Flow (CFS)	0.671

Manhole 7.3018 Sanitary Sewer Peak Flow	
PE	2,033
Peaking Factor	3.58
Peak Flow (Million Gallons Per Day)	**0.728**
Peak Flow (Gallons Per Day)	**727910**
Flow (Gallons Per Minute)	505
Flow (CFS)	1.126

EXISTING PEAK FLOW CALCULATIONS
EXHIBIT 3

Manhole 7.4002 Sanitary Sewer Peak Flow	
PE	410
Peaking Factor	4.02
Peak Flow (Million Gallons Per Day)	**0.165**
Peak Flow (Gallons Per Day)	**164508**
Flow (Gallons Per Minute)	114
Flow (CFS)	0.255

Manhole 6.3110 Sanitary Sewer Peak Flow	
PE	361
Peaking Factor	4.04
Peak Flow (Million Gallons Per Day)	**0.146**
Peak Flow (Gallons Per Day)	**145757**
Flow (Gallons Per Minute)	101
Flow (CFS)	0.226

Sanitary Sewer Peak Flow Tributary to Renaux Manor Lift Staton	
PE	1,134
Peaking Factor	3.76
Peak Flow (Million Gallons Per Day)	**0.427**
Peak Flow (Gallons Per Day)	**426883**
Flow (Gallons Per Minute)	296
Flow (CFS)	0.660

EXHIBIT 4

SITE DATA

Total Site Bedroom Count	Total # Units	Total Unit %	Total Parking Req.		Total Parking Provided	
STUDIO	16	4.8%	1.2/du	20	Surface	406
1 BR	160	48.4%	1.2/du	192	Garage	120
2 BR	155	46.8%	1.7/du	264	Total	526 (1.6:1)
Tot. Rental Units	331	100.0%		476		
Rental Site Lot Area/Unit	20.30 Ac. 2,671 SF/Unit					

Phase I
266 Units
Phase II
65 Units

% studio = 4.83%
% 1BR = 48.3%
% 2BR = 46.8%

— = SANITARY SEWER

average:
22 units/bldg
1.06 studio, say 1
10.6 1BR, say 11
10.3 2BR, say 10

North Scale 1" = 60'
0 60 120 240

JCF REAL ESTATE

Sheet LP-1
Corporate Reserve of St. Charles
Concept Site Plan

Date: March 21, 2012

BSB DESIGN

PROPOSED CONDITIONS CAPACITY ANALYSIS - CORPORATE RESERVE TO PECK ROAD

Upstream Manhole	Downstream Manhole	Upstream Elevation	Downstream Elevation	Pipe Length	Pipe Diameter	Pipe Slope	Pipe Capacity (CFS)	Cummulative Peak Sanitary Flow (CFS)	Total I & I (CFS)	Cummulative Wet Weather Flow (CFS)	Pipe Capacity (%)
6.3196	6.3198	766.10	764.10	122	8	1.64%	1.551	0.007	0.00390	0.011	0.7
6.3198	6.3194	764.10	762.68	329	8	0.43%	0.796	0.014	0.00390	0.022	2.8
6.3194	6.3193	762.68	761.87	188	8	0.43%	0.795	0.087	0.00390	0.095	11.9
6.3193	6.3189	761.87	761.45	66	8	0.64%	0.967	0.087	0.00390	0.095	9.8
6.3189	6.3188	761.45	761.06	129	8	0.30%	0.666	0.130	0.00390	0.138	20.6
6.3188	6.3192	761.06	759.49	378	8	0.42%	0.781	0.130	0.00390	0.138	17.6
6.3192	6.3190	759.49	758.74	188	8	0.40%	0.765	0.183	0.00390	0.190	24.9
6.3190	6.3191	758.74	758.27	95	8	0.49%	0.852	0.183	0.00390	0.190	22.3
6.3191	6.3200	758.27	756.90	309	8	0.44%	0.807	0.183	0.00390	0.190	23.6
6.3200	6.3105	756.90	755.81	153	8	0.71%	1.023	0.183	0.00390	0.190	18.6
6.3105	6.3104	755.95	754.16	53	8	3.38%	2.227	0.207	0.00390	0.215	9.6
6.3104	6.3103	754.16	752.19	63	8	3.13%	2.143	0.207	0.00390	0.215	10.0
6.3103	7.3089	752.19	748.53	114	8	3.21%	2.171	0.207	0.00390	0.215	9.9
7.3089	7.3088	748.53	746.70	94	8	1.95%	1.691	0.207	0.00390	0.215	12.7
7.3088	7.3087	746.70	745.11	87	8	1.83%	1.638	0.207	0.00390	0.215	13.1
7.3087	7.3086	745.11	742.24	147	8	1.95%	1.693	0.226	0.00390	0.234	13.8
7.3086	7.3085	742.24	740.40	80	8	2.30%	1.838	0.226	0.00390	0.234	12.7
7.3085	7.3084	740.40	736.98	82	8	4.17%	2.475	0.226	0.00390	0.234	9.5
7.3084	7.3083	736.98	731.72	114	8	4.61%	2.603	0.226	0.00390	0.234	9.0
7.3083	7.3082	731.72	731.15	69	12	0.83%	3.247	0.438	0.00800	0.450	13.9
7.3082	7.3081	731.15	730.77	99	12	0.38%	2.213	0.438	0.00800	0.454	20.5
7.3081	7.3080	730.77	730.20	112	12	0.51%	2.549	0.847	0.00800	0.863	33.9

PROPOSED CONDITIONS CAPACITY ANALYSIS - REMINGTON GLEN SYSTEM INTO MH 7.3083 ALONG WOODWARD DRIVE

Upstream Manhole	Downstream Manhole	Upstream Elevation	Downstream Elevation	Pipe Length	Pipe Diameter	Pipe Slope	Pipe Capacity (CFS)	Cummulative Peak Sanitary Flow (CFS)	Total I & I (CFS)	Cummulative Wet Weather Flow (CFS)	Pipe Capacity (%)
6.3110	6.3109	748.79	747.56	114	8	1.08%	1.259	0.226	0.00410	0.230	18.2
6.3109	6.3108	747.56	746.07	125	8	1.19%	1.323	0.226	0.00410	0.234	17.7
6.3108	6.3107	746.07	745.57	126	8	0.40%	0.763	0.226	0.00410	0.234	30.6
6.3107	6.3106	745.57	742.99	162	8	1.59%	1.529	0.226	0.00410	0.234	15.3
6.3106	6.4063	742.99	741.70	137	8	0.94%	1.176	0.226	0.00410	0.234	19.9
6.4063	6.4062	741.70	740.50	129	8	0.93%	1.169	0.226	0.00410	0.234	20.0
6.4062	7.4049	735.18	734.99	87	12	0.22%	1.669	0.601	0.00410	0.609	36.5
7.4049	7.4048	734.99	734.30	180	12	0.38%	2.212	0.601	0.00410	0.609	27.5
7.4048	7.4047	734.30	734.14	43	12	0.37%	2.179	0.601	0.00410	0.609	27.9
7.4047	7.4046	734.14	733.62	167	12	0.31%	1.993	0.601	0.00410	0.609	30.5
7.4046	7.4045	733.62	733.02	184	12	0.33%	2.040	0.601	0.00410	0.609	29.8
7.4045	7.3094	733.02	732.75	114	12	0.24%	1.739	0.601	0.00410	0.609	35.0
7.3094	7.3090	732.75	732.16	132	12	0.45%	2.388	0.601	0.00410	0.609	25.5
7.3093	7.3092	746.22	745.07	118	8	0.97%	1.196	0.601	0.00410	0.609	50.9
7.3092	7.3091	745.07	740.60	116	8	3.85%	2.379	0.601	0.00410	0.609	25.6
7.3091	7.3090	740.60	737.63	85	8	3.49%	2.265	0.601	0.00410	0.609	26.9
7.3090	7.3083	737.63	731.72	202	12	2.93%	6.111	0.601	0.00410	0.609	10.0

PROPOSED CONDITIONS CAPACITY ANALYSIS - PECK ROAD INTO RENAUX MANOR LIFT STATION

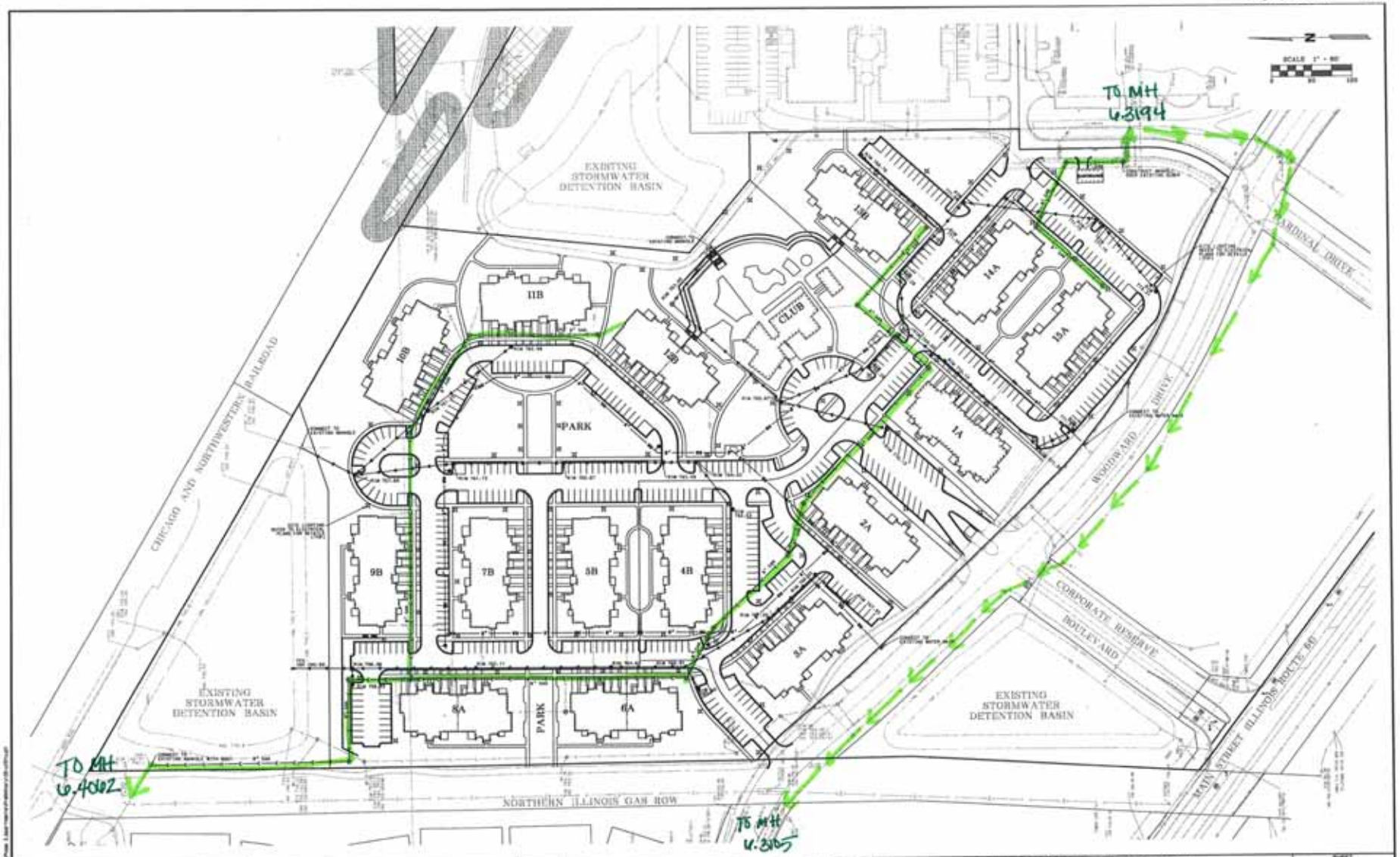
Upstream Manhole	Downstream Manhole	Upstream Elevation	Downstream Elevation	Pipe Length	Pipe Diameter	Pipe Slope	Pipe Capacity (CFS)	Cummulative Peak Sanitary Flow (CFS)	Total I & I (CFS)	Cummulative Wet Weather Flow (CFS)	Pipe Capacity (%)
7.4002	7.4050	730.98	729.79	307	8	0.39%	0.754	0.255	0.00890	0.263	34.9
7.4050	7.3080	725.47	725.15	108	15	0.30%	3.526	0.255	0.00890	0.272	7.7
7.3080	7.3034	725.15	724.84	142	15	0.22%	3.026	1.073	0.01690	1.099	36.3
7.3034	7.3033	724.84	723.47	401	15	0.34%	3.786	1.073	0.01690	1.107	29.2
7.3033	7.3032	723.47	722.89	320	15	0.18%	2.758	1.073	0.01690	1.107	40.1
7.3032	7.3031	722.89	722.40	281	15	0.17%	2.705	1.108	0.01690	1.142	42.2
7.3031	7.3018	722.40	721.99	257	15	0.16%	2.587	1.108	0.01690	1.142	44.1
7.3018	7.3017	721.99	721.42	292	15	0.20%	2.862	1.564	0.03120	1.612	56.3
7.3017	7.3016	721.42	720.88	291	15	0.19%	2.790	1.564	0.03120	1.626	58.3
7.3016	7.3015	720.88	720.33	290	15	0.19%	2.821	1.564	0.03120	1.626	57.6
7.3015	7.3053	720.33	719.44	312	15	0.29%	3.459	1.564	0.03120	1.626	47.0

PROPOSED PEAK FLOW CALCULATIONS
EXHIBIT 6

Manhole 6.3194 Sanitary Sewer Peak Flow	
PE	95
Peaking Factor	4.25
Peak Flow (Million Gallons Per Day)	**0.040**
Peak Flow (Gallons Per Day)	**40371**
Flow (Gallons Per Minute)	28
Flow (CFS)	0.062

Manhole 6.4062 Sanitary Sewer Peak Flow	
PE	618
Peaking Factor	3.93
Peak Flow (Million Gallons Per Day)	**0.242**
Peak Flow (Gallons Per Day)	**242388**
Flow (Gallons Per Minute)	168
Flow (CFS)	0.375

EXHIBIT 1



Mackie Consultants, LLC
9575 W. Higgins Road, Suite 600
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

CLIENT:
ST. CHARLES FAIRGROUNDS
OFFICE PARK INVESTORS, LLC
1800 THOREAU DRIVE, SUITE 178
SCHAUMBURG, ILLINOIS 60173
PHONE: (630) 885-7880 FAX: (847) 348-7801

DATE	DESCRIPTION OF REVISION	BY

DESIGNED	K.M./TRB
DRAWN	WHM
APPROVED	DAS
DATE	03-09-15
SCALE	1" = 60'

PRELIMINARY UTILITY PLAN
SUBDIVISION PRELIMINARY PLAN
THE CORPORATE RESERVE OF ST. CHARLES PHASE II
ST. CHARLES, ILLINOIS

SHEET 5 OF 5
PROJECT NUMBER: 1621
© MACKIE CONSULTANTS, LLC, 2015
ILLINOIS FIRM LICENSE #184.005864

EXHIBIT 8

RENAUX MANOR

PUMP STATION CALCULATIONS

PREPARED FOR:

WISEMAN-HUGHES ENTERPRISES
975 EAST 22nd STREET
WHEATON, ILLINOIS 60187

PREPARED BY:
INTECH CONSULTANTS, INC.
5413 WALNUT AVENUE
DOWNERS GROVE, ILLINOIS 60515

April 23, 1997
Revised June 27, 1997
Revised January 21, 1998

JOB NO. 95026

EXHIBIT 8

FLOW RATE CALCULATIONS

I. RENAUX MANOR FLOWS

A. SINGLE FAMILY AREA
   1. 265 units * 3.5 PE/unit = 927.5 PE
   2. 927.5 PE * 100 gpcpd = 92,750 gpd (average)

B. MULTI-FAMILY AREA
   1. 238 units * 3.0 PE/unit (assumed all 3 bedroom units) = 714 PE
   2. 714 PE * 100 gpcpd = 71400 gpd (average)

C. COMMERCIAL SITE
   1. 7.6 acres * 15 PE/ acre = 114 PE
   2. 114 PE * 100 gpcpd = 11400 gpd (average)

II. OFFSITE FLOWS

A. AREA TRIBUTARY TO MANHOLE 46 (RHA&A plans) MINUS RENAUX MANOR AREA
   1. 2747 PE (manhole 46) - 612 PE (from Renaux Manor) + 70 PE (from Area 2) = 2205 PE
   2. 2205 PE * 100 gpcpd = 220500 gpd (average)

B. AREA TRIBUTARY TO MANHOLE 33 (RHA&A plans) MINUS RENAUX MANOR AREA
   1. 2422 PE (manhole 33) - 582 PE (from Renaux Manor) - 70 PE (from Renaux Manor) - 1740 PE (from water treatment plant, per Greg Chismark, City of St. Charles) = 30 PE
   2. 30 PE * 100 gpcpd = 3000 gpd (average)

III. TOTAL FLOW TO LIFT STATION

A. [927.5 + 714 + 114 (Renaux Manor)] + [2205 + 30 (offsite area)] = 3990.5 PE
   use **4000 PE**

B. Average flow: 4000 PE * 100 gpcpd = 400,000 gpd = 277.7 gpm

C. Calculated peaking factor = $(18 + (4^{-5}))/(4+(4^{-5}))$ = 3.33

D. Q max. using 3.33 peaking factor = 1,333,333 gpd calculated max = 925 gpm

E. Q max. using 4.0 peaking factor = 1,600,000 gpd design maximum = 1111 gpm
   1111 gpm flow used for lift station design

Tributary To Renoux Manor Lift Station: Existing Condition Residentia					
Area	**Manhole Location**	**Single Family Units**	**Multi Family Units**	**Flow Per Unit (GPD)**	**Total Flow (GPD)**
Renaux Manor Unit 1 & Artesian Springs	7.3018	152	-	350	53,200
Renaux Manor Unit 2[2]	To Lift Station	-	35	1200	42,000
Renaux Manor Unit 2[2]	7.3018	-	29	1200	34,800
Renaux Manor Unit 3	7.4002	117	-	350	40,950
Remington Glen[1]	7.3083	-	26	-	36,050
Autumn Leaves Assisted Living[1]	7.3081	-	1	6000	6,000
Pine Ridge & Regency Estates[1]	To Lift Station	-	-	-	56,900
Assisted Living[3]	To Lift Station	-	1	12000	12,000
Total Daily Flow for Residential					**281,900**

Notes:

1) Total flow value based on information obtained from IEPA permit supplied by the City of St. Charles

2) Renaux Manor Unit 2: 1 Multi Family Unit = 4 3-BR units. See calculation sheet for breakdown of flow per unit (gpd)

3) Assisted Living: Complex located off of IL Rt 64. Estimated flow (gpd) based on two times the value of Autumn Leaves Assisted Living

Tributary To Renoux Manor Lift Station: Existing Condition Non-Residentia						
Building	**Manhole Location**	**Use**	**Acres**	**Employees or PE/acre**	**GPD/Employee (GPD)**	**Total Flow (GPD)**
Walgreens[2,4]	7.3032	Commercial	-	73	15.00	1,095
Corporate Reserve - north[3]	6.3196	Office Buildings	0.4	70	15.00	1,045
Corporate Reserve - central[3]	6.3198	Office Buildings	0.4	70	15.00	1,045
Corporate Reserve - south[3]	6.3194	Office Buildings	0.6	105	15.00	1,568
Corporate Reserve - vacant west[1]	6.3192	Commercial	4.2	20	-	8,400
Corporate Reserve - vacant east[1]	6.3189	Commercial	3.3	20	-	6,600
Vacant Lot[1]	6.3105	Commercial	2.0	20	-	3,960
Valley Springs Auto[2]	7.3032	Commercial	-	-	-	3,000
Main Street Center[2]	7.3087	Office Buildings	-	-	-	3,200
Westgate[2]	7.3032	Commercial	-	-	-	2,400
The Bike Rack & Adjacent Commercial[3]	To Lift Station	Commercial	0.8	132	15	1,986
Fire Station[3]	To Lift Station	-	0.2	35	15	523
Total Daily Flows for Non-Residential						**34,823**

Notes:

1) Area in acres measured by planimeter. 20 PE/acre used as conservative estimate for projected future use

2) PE value taken from issued IEPA permits supplied by the City of St. Charles

3) Number of employees based on 1 person per 250 square feet

4) Total flow based on IEPA permit; 73 estimated employees

Tributary To Renoux Manor Lift Station: Proposed Condition Residential (Corporate Reserve of St. Charles Ph II					
Area	**Manhole Location**	**Single Family Units**	**Multi Family Units**	**Flow Per Unit (GPD)**	**Total Flow (GPD)**
Corporate Reserve - proposed	6.4062	-	13	4750	61,750
Corporate Reserve - proposed	6.3194	-	2	4750	9,500
Total Daily Flow for Residential					**71,250**

Notes:

1) 1 Multi Family Unit = 1 studio, 11-1BR, 10-2BR units. See calculation sheet for breakdown of flow per unit (gpd)

EXHIBIT 9

Summary of Average Daily Flows into Renaux Manor Lift Station	
	GPD
Existing Condition Residential	281,900
Existing Condition Non-Residential	34,823
Proposed Condition Residential	71,250
TOTAL	387,973

SUPPORTING DOCUMENTS

Wills Burke Kelsey Associates, Ltd.
116 West Main Street, Suite 201, St. Charles, Illinois 60174
TEL: (630) 443-7755 FAX: (630) 443-0533
8 East Galena Boulevard, Suite 402, Aurora, Illinois 60506
TEL: (630) 701-2245 FAX: (630) 800-1626

JOB 12-0126
SHEET NO. 1 OF
CALCULATED BY JCG DATE 4/4/12
CHECKED BY DATE
SCALE

Average Flow per Multi Family Bldg @ Corporate Reserve

avg units per building = 22

studio = 1
1 BR = 11
2 BR = 10
22 units

Population Equivalent (PE)
Studio = 1 persons
1 BR = 1.5 persons
2 BR = 3 persons
] 1 PE = 100 gpd

1-studio (1 PE) + 11-1 BRs (1.5 PE) + 10-2 BRs (3 PE) = 41.5 PE

41.5 PE (100 gpd) = 4150 gpd / building

Renaux Manor Unit 2
avg units per building = 4, assume all 3 BR (PE = 3)
3 PE × 4 units = 12 PE
12 PE (100 gpd) = 1200 gpd / building

INSTRUCTIONS FOR SCHEDULE A -- SEWER SERVICE CONNECTIONS
OR SCHEDULE B – PUBLICLY OWNED OR REGULATED SEWER EXTENSIONS
Revised November 2005

Schedule A must be filled out and completed for all sewer connections, which must be covered by a permit in accordance with the Illinois Pollution Control Board Regulations or where the municipality or local public sewer owner will not provide maintenance on said sewer. Sewer extensions which are to be maintained by the municipality or local sewer owner use Schedule B.

When the schedule item is not applicable to your project write "not applicable" or N/A.

1. The name of the project must be the same as the project name indicated on Form WPC-PS-1.

2. The sewer connection or non-public sewer will serve the indicated type of user such as the residential, commercial, light industrial (domestic only), manufacturing, recreational, other. It may be possible that one, two, or all of the appropriate blanks would be checked as well.

3. The nature of the project is intended to be a brief summary description of the type of project covered by the permit application.

4.1. Either submit the required map or a letter from the Illinois Historic Preservation Agency indicating that they have reviewed the project. The Agency has committed to a cooperative effort with the Illinois Historic Preservation Agency (IHPA). Under the provisions of the State Agency Historic Resources Preservation Act, 30 ILCS 605/1, IEPA informs IHPA of construction permit applications shortly after they are received. We would appreciate your submission of location maps and legal descriptions to facilitate this process. IEPA is obligated not to issue the permit until 30 days from the date that IHPA has received the copy of the application or until a letter is received from them. Permit applicants should submit information to IHPA independently from applying for construction permits from IEPA. If the project has previously been reviewed by the Illinois Historic Preservation Agency, inclusion of the sign off letter or approval with your application will enable IEPA to process your application more expeditiously. IHPA contact information is:

ILLINOIS HISTORIC PRESERVATION AGENCY
Division of Review and Compliance
1 Old State Capitol Plaza
Springfield, Illinois 62701

Telephone Number: 217/785-4512
Fax Number: 217/782-8161

4.2. Please submit a sketch of the project. If a suitable clear layout is included on the plan drawings, this request will be considered met.

4.3. A map of the immediate area to be served by the sewer in question must be submitted.

4.4. All potential future service area must also be shown.

It should be emphasized that the loading allocated against the waste treatment facility and intermediate sewer system will be based on the immediate area and population to be served by the permit. Any review fee for this project (see 6.4 below) will be based on the design loading of the sewer.

5. A facilities planning area (FPA) is a defined area that anticipates sewer service to be provided by a specific wastewater treatment facility. This information should be available from the owner/operator of the sewerage system or the owner of the sewage treatment plant. Sewers serving areas not identified in the proper FPA will be denied.

6. The following design criteria should be used in estimating the population equivalent of a residential building:

Efficiency or Studio Apartment	= 1	person
1 Bedroom Apartment	= 1.5	persons
2 Bedroom Apartment	= 3	persons
3 Bedroom Apartment	= 3	persons – ALSO USE FOR TOWNHOME
Single Family Home	= 3.5	persons
Mobile Home	= 2.25	persons

Commonly used quantities of sewage flows from miscellaneous type facilities are listed in Appendix B, Table No. 2 of the Illinois Recommended Standards for Sewage Works.

6.3 Total of Items 6.1 and 6.2.

Wills Burke Kelsey Associates, Ltd.
116 West Main Street, Suite 201, St. Charles, Illinois 60174
TEL: (630) 443-7755 FAX: (630) 443-0533
8 East Galena Boulevard, Suite 402, Aurora, Illinois 60506
TEL: (630) 701-2245 FAX: (630) 800-1626

JOB 12-0126
SHEET NO. 1 OF 1
CALCULATED BY JCG DATE 4/23/12
CHECKED BY _____ DATE _____
SCALE I & I calculations

I & I calculation

I & I rate: 500 gal/in/mi/day
=> for calculation, all pipe size = 8"

CORPORATE RESERVE TO PECK RD, EXISTING:

total pipe length = 3080 LF / 5280 = 0.58 mi

Rate = 500 (8)(0.58) = 2320 gal/day = 0.0036 cfs

CORPORATE RESERVE TO PECK RD, PROPOSED:

add total pipe length of 280 LF / 5280 = 0.053 mi

Rate = 500(8)(.58+.053) = 2532 gal/day = 0.0039 cfs

REMINGTON GLEN, EXISTING

total pipe length = 1970 LF / 5280 = 0.37 mi

Rate = 500 (8)(.37) = 1480 gal/day = 0.0023 cfs

REMINGTON GLEN, PROPOSED

add total pipe length of 1520 LF / 5280 = 0.29 mi

Rate = 500(8)(0.37+0.29) = 2640 gal/day = 0.0041 cfs

PECK RD TRUNK, EXISTING + PROPOSED

total pipe length = 5410 LF (R.M. unit 3 + 1840' (PECK to 7.3018)
= 7580 LF / 5280 = 1.44 mi

Rate = 500(8)(1.44) = 5160 gal/day = 0.0089 cfs

PECK RD TRUNK, EXISTING & PROPOSED

total pipe length = 910' (7.3018 to LS) + 8010 (RM UNIT 1) + 3140 (RM UNIT 2) = 12,180 LF / 5280 = 2.31 mi

Rate = 500(8)(2.31) = 9227 gal/day = 0.0143 cfs

Note: Rate calculated w/ conservative approach. EPA rate = 200 gal/in/mi/day
Flow input at upstream MH.

Wills Burke Kelsey Associates, Ltd.
116 West Main Street, Suite 201, St. Charles, Illinois 60174
TEL: (630) 443-7755 FAX: (630) 443-0533
8 East Galena Boulevard, Suite 402, Aurora, Illinois 60506
TEL: (630) 701-2245 FAX: (630) 800-1626

JOB 12-0126
SHEET NO. _____ OF _____
CALCULATED BY JCG DATE 4/23/12
CHECKED BY _____ DATE _____
SCALE _____

Average Daily Flow per Real time pump data:

Pump Capacity = 690 gpm (per Specs)

average daily pump time = 1.2 hrs (per data from Jan 2012 - Mar 2012)

$\frac{690 \text{ gal}}{\text{min}} \times 1.2 \text{ hrs} \times \frac{60 \text{ min}}{1 \text{ hr}} = 49,680 \text{ gallons}$

2 pumps = 49,680 gal x 2 = 99,360 gal

*third pump run time data suggests it is not utilized.

Average daily flow = 99,360 gal/day

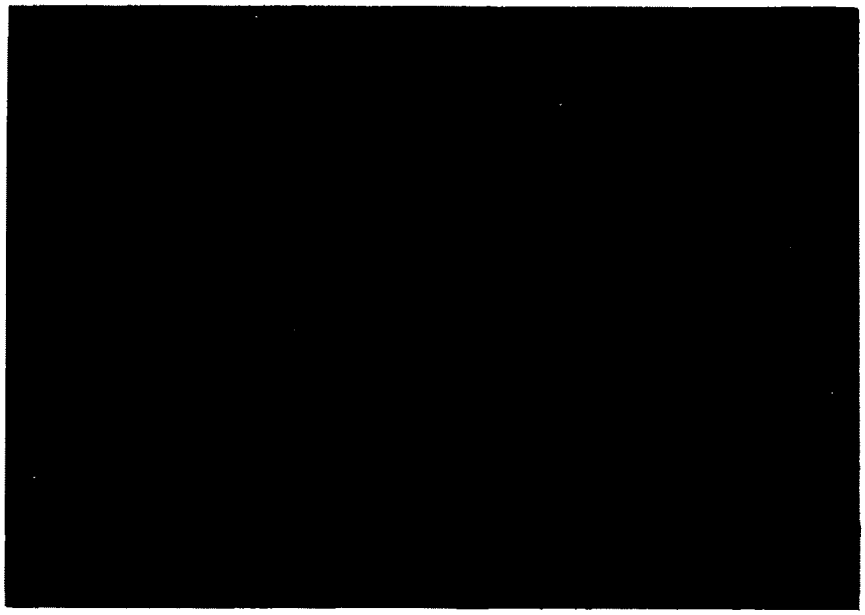
Peak Flow per Real time pump data:

Pump Capacity = 690 gpm

peak pump time = 3.1 hrs (Jan 2012)

$\frac{690 \text{ gal}}{\text{min}} \times 3.1 \text{ hr} \times \frac{60 \text{ min}}{1 \text{ hr}} = 153,180 \text{ gallons}$

2 pumps x 153,180 gal = 306,360 gal/day



Metropolitan Industries, Inc.

Metropolitan Pump Company

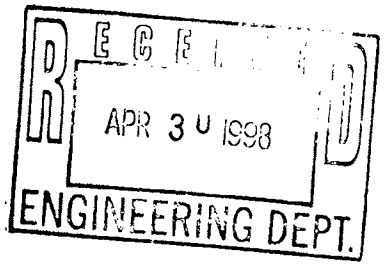
Metropolitan Marketing

Metropolitan Equipment

MANUFACTURERS & DISTRIBUTORS OF QUALITY EQUIPMENT

Metropolitan Industries, Inc.

SUBMISSION FOR APPROVAL



PROJECT
TRIPLEX COMPONENT LIFT STATION

LOCATION
RENAUX MANOR
ST. CHARLES, ILLINOIS

ENGINEER
INTECH CONSULTANTS

CONTRACTOR
DEMPSY ING

REPRESENTATIVE
ROBERT L. WEDELL

DATE
April 28, 1998

Specifications

PROJECT: Sanitary Lift Station
Renaux Manor
St. Charles, Illinois

Application: Triplex Component Lift Station

Model: (3) Hydromatic model S4BX750 submersible non-clog explosion proof sewage pumps with 75' dual cords.

Capacity: 690 GPM @ 29' TDH
3" dia. solids / 4" discharge

Motor(s): (2) 7 ½HP, 1150 RPM, 460 volt, 3 phase 60 Hz., 1.20 service factor
Explosion Proof: Class I, Division I, Group C and or D Locations

Control: (1) Submersible level transducer **(primary)**
(5)Submersible mercury level switches to control on, off, override and alarm levels **(secondary)**. All with 75' cords.

Control Panel: Furnished
Control panel to include magnetic starters, circuit breakers, run lights, H-O-A switches, electric alternator, main disconnect switch, ETM's, heat and seal failure sensors, intrinsically safe relays, automatic transfer switch (by Patton Power), Level Master and variable frequency drives all in a NEMA 3R "traffic box" type enclosure.

Alarm: High water alarm light & ~~AUTOMATIC~~ CONNECTION TO MAIN CONTROL PANEL @ WWTP

Basin: 10' dia. X 33.13' deep with outside valve box
Concrete, piping and valves - by others

Accessories:
- (3) Simplex Aluminum wet well access hatch model: APS300-36x32
- (1) Simplex aluminum valve vault access hatch model APS300-36x36
- (3) 4" M-T-M base elbows
- (3) 4" M-T-M seal flanges
- (3) 33' lengths of 3/16" stainless steel lifting chain
- (12) 17' lengths of 2" sched. 40 stainless steel guide rails
- (3) Sets of lower guide rail supports (located on base elbow)
- (3) Sets of intermediate guide rail supports
- (3) Sets of upper guide rail supports (mounted to wet ell access hatches)
- (1) Stainless steel 5 float mounting bracket
- (2) 10 lbs cast iron anchor and stainless steel chain float mounting system
- (1) Heat and seal failure probes (per pump)

METROPOLITAN PUMP COMPANY
division of Metropolitan Industries, Inc.
37 Forestwood Drive
Romeoville, Illinois 60446
phone: (815)886-9200 fax: (815)886-4573

Renaux Manor							
Jan. 2012	Pump #1		Pump #2		Pump #3		
Date	Hour Meter	Hours Run	Hour Meter	Hours Run	Hour Meter	Hours Run	
1	6169.9	0.0	7994.9	0.0	9294.9	0.0	
2	6169.9	3.4	7994.9	0.0	9294.9	2.6	
3	6173.3	1.4	7994.9	0.0	9297.5	1.1	
4	6174.7	1.2	7994.9	0.0	9298.6	0.9	
5	6175.9	1.4	7994.9	0.0	9299.5	1.1	
6	6177.3	0.0	7994.9	0.0	9300.6	0.0	
7	6177.3	2.5	7994.9	0.0	9300.6	1.9	
8	6179.8	0.0	7994.9	0.0	9302.5	0.0	
9	6179.8	3.3	7994.9	0.0	9302.5	2.6	
10	6183.1	1.4	7994.9	0.0	9305.1	1.1	
11	6184.5	1.1	7994.9	0.0	9306.2	0.8	
12	6185.6	1.5	7994.9	0.0	9307.0	1.2	
13	6187.1	0.0	7994.9	0.0	9308.2	0.0	
14	6187.1	2.4	7994.9	0.0	9308.2	1.9	
15	6189.5	1.4	7994.9	0.0	9310.1	1.6	
16	6190.9	0.0	7994.9	0.0	9311.7	0.0	
17	6190.9	2.2	7994.9	0.0	9311.7	3.1	
18	6193.1	1.0	7994.9	0.0	9314.8	1.3	
19	6194.1	0.9	7994.9	0.0	9316.1	0.0	
20	6195.0	0.0	7994.9	0.0	9316.1	0.0	
21	6195.0	1.8	7994.9	0.0	9316.1	3.7	
22	6196.8	1.4	7994.9	0.0	9319.8	2.0	
23	6198.2	0.0	7994.9	0.0	9321.8	0.0	
24	6198.2	2.4	7994.9	0.0	9321.8	3.3	
25	6200.6	0.8	7994.9	0.0	9325.1	1.0	
26	6201.4	1.1	7994.9	0.0	9326.1	1.6	
27	6202.5	0.0	7994.9	0.0	9327.7	0.0	
28	6202.5	2.5	7994.9	0.0	9327.7	2.0	
29	6205.0	1.9	7994.9	0.0	9329.7	1.5	
30	6206.9	0.0	7994.9	0.0	9331.2	0.0	
31	6206.9	0.0	7994.9	0.0	9331.2	0.0	
Carried Forward	6206.9		7994.9		9331.2		
Total		**37.0**		**0.0**		**36.3**	
Daily Avg.		**1.2**		**0.0**		**1.2**	
Daily Max.		**3.4**		**0.0**		**3.7**	

Renaux Manor							
Feb. 2012	Pump #1		Pump #2		Pump #3		
Date	Hour Meter	Hours Run	Hour Meter	Hours Run	Hour Meter	Hours Run	
1	6209.8	1.2	7994.9	0.0	9333.4	1.0	
2	6211.0	1.5	7994.9	0.0	9334.4	1.2	
3	6212.5	0.0	7994.9	0.0	9335.6	0.0	
4	6212.5	2.6	7994.9	0.0	9335.6	2.0	
5	6215.1	2.0	7994.9	0.0	9337.6	1.6	
6	6217.1	0.0	7994.9	0.0	9339.2	0.0	
7	6217.1	2.7	7994.9	0.0	9339.2	2.2	
8	6219.8	0.9	7994.9	0.0	9341.4	0.8	
9	6220.7	1.8	7994.9	0.0	9342.2	1.5	
10	6222.5	0.0	7994.9	0.0	9343.7	0.0	
11	6222.5	2.5	7994.9	0.0	9343.7	1.9	
12	6225.0	1.4	7994.9	0.0	9345.6	1.8	
13	6226.4	0.0	7994.9	0.0	9347.4	0.0	
14	6226.4	2.2	7994.9	0.0	9347.4	3.0	
15	6228.6	0.8	7994.9	0.0	9350.4	1.1	
16	6229.4	1.1	7994.9	0.0	9351.5	1.5	
17	6230.5	0.0	7994.9	0.0	9353.0	0.0	
18	6230.5	2.1	7994.9	0.0	9353.0	2.9	
19	6232.6	1.7	7994.9	0.0	9355.9	1.3	
20	6234.3	0.0	7994.9	0.0	9357.2	0.0	
21	6234.3	2.4	7994.9	0.0	9357.2	2.5	
22	6236.7	0.9	7994.9	0.0	9359.7	1.2	
23	6237.6	1.4	7994.9	0.0	9360.9	1.6	
24	6239.0	0.0	7994.9	0.0	9362.5	0.0	
25	6239.0	2.8	7994.9	0.0	9362.5	2.8	
26	6241.8	0.5	7994.9	0.0	9365.3	1.8	
27	6242.3	0.0	7994.9	0.0	9367.1	0.0	
28	6242.3	2.2	7994.9	0.0	9367.1	3.1	
29	6244.5	0.0	7994.9	0.0	9370.2	0.0	
Carried Forward	6244.5		7994.9		9370.2		
Total		34.7		0.0		36.8	
Daily Avg.		1.2		0.0		1.3	
Daily Max.		2.8		0.0		3.1	

Renaux Manor							
Mar. 2012	Pump #1		Pump #2		Pump #3		
Date	Hour Meter	Hours Run	Hour Meter	Hours Run	Hour Meter	Hours Run	
1	6245.5	0.8	7994.9	0.0	9371.5	0.7	
2	6246.3	0.0	7994.9	0.0	9372.2	0.0	
3	6246.3	1.9	7994.9	0.0	9372.2	3.0	
4	6248.2	1.4	7994.9	0.0	9375.2	1.9	
5	6249.6	0.0	7994.9	0.0	9377.1	0.0	
6	6249.6	2.2	7994.9	0.0	9377.1	3.1	
7	6251.8	0.7	7994.9	0.0	9380.2	1.0	
8	6252.5	1.2	7994.9	0.0	9381.2	1.6	
9	6253.7	0.0	7994.9	0.0	9382.8	0.0	
10	6253.7	1.8	7994.9	0.0	9382.8	2.8	
11	6255.5	1.4	7994.9	0.0	9385.6	1.6	
12	6256.9	0.0	7994.9	0.0	9387.2	0.0	
13	6256.9	2.2	7994.9	0.0	9387.2	3.0	
14	6259.1	1.1	7994.9	0.0	9390.2	1.6	
15	6260.2	0.8	7994.9	0.0	9391.8	1.2	
16	6261.0	0.0	7994.9	0.0	9393.0	0.0	
17	6261.0	2.0	7994.9	0.0	9393.0	2.7	
18	6263.0	1.3	7994.9	0.0	9395.7	1.8	
19	6264.3	0.0	7994.9	0.0	9397.5	0.0	
20	6264.3	2.0	7994.9	0.0	9397.5	2.8	
21	6266.3	1.3	7994.9	0.0	9400.3	1.7	
22	6267.6	0.8	7994.9	0.0	9402.0	1.1	
23	6268.4	0.0	7994.9	0.0	9403.1	0.0	
24	6268.4	1.8	7994.9	0.0	9403.1	2.6	
25	6270.2	1.3	7994.9	0.0	9405.7	1.8	
26	6271.5	0.0	7994.9	0.0	9407.5	0.0	
27	6271.5	1.8	7994.9	0.0	9407.5	2.5	
28	6273.3	0.9	7994.9	0.0	9410.0	1.2	
29	6274.2	1.0	7994.9	0.0	9411.2	1.4	
30	6275.2	0.0	7994.9	0.0	9412.6	0.0	
31	6275.2	0.0	7994.9	0.0	9412.6	0.0	
Carried Forward	6275.2		7994.9		9412.6		
Total		**29.7**		**0.0**		**41.1**	
Daily Avg.		**1.0**		**0.0**		**1.3**	
Daily Max.		**2.2**		**0.0**		**3.1**	

TITLE: CORPORATE RESERVE SANITARY SEWER EVALUATION

RENAUX MANOR LIFT STATION OVERALL SERVICE AREA

NO.	DATE	NATURE OF REVISION

DSGN. JCG
DWN. EAM
CHKD. GJC
SCALE: 1" = 300'
OV1 20126.MXD

TITLE:
CITY OF ST. CHARLES
2 E. MAIN STREET
ST. CHARLES, IL 60174
(630) 377-4400

WILLS BURKE KELSEY ASSOCIATES LTD.
116 West Main Street, Suite 201
St. Charles, Illinois 60174
(630) 443-7755

PROJECT NO. 12-0126
DATE 04/19/2012
SHEET 1 OF 1
DRAWING NO.
OV1

Map Document: (W:\Projects\2012\12-0126\RiverGrange\Gadd\GIS\mxd\Exhibits\OV1 20126.mxd)
04/19/2012 - 11:53:23 AM

116 West Main Street, Suite 201
St. Charles, Illinois 60174
Phone: 630.443.7755
Fax: 630.443.0533
www.wbkengineering.com

WILLS BURKE KELSEY ASSOCIATES

MEMORANDUM

Date: May 7, 2012

To: Chris Tiedt P.E.

CC:

From: Greg Chismark

Subject: Corporate Reserve Sanitary Sewer Study

This memo is a follow up to the subject study at the request of City staff. The purpose is to document the projected wastewater flow from the Corporate Reserve development (former Cardinal Property) comparing several sources. These are:

- Improvements Phasing Plan Update for Fairgrounds / West Gateway Development dated January 1996
- West Side WRF Facility Plan Update dated August 2008
- Corporate Reserve of St. Charles Sanitary Sewer Evaluation dated April 2012

The Corporate Reserve development is located on the former Cardinal Property. Generally, it is located between IL Route 64 (Main Street) and the former UPRR tracks / Great Western Trail and Remington Glen and Regency Estates / Pine Ridge Park. The entire property consists of approximately 50 acres. Find below a table comparing projected wastewater flows.

Source	Est P.E.	Flow gpd	Land Use	Comments
Improvements Phasing Plan Fairgrounds/West Gateway - 1996	903	90,300	Mixed	Significant residential component @ 24 P.E./ac.
West Side WRF Facility Plan Update- 2008	500	50,000		10 P.E./ac.
Corporate Reserve Sanitary Sewer Study - 2012	899	89,908	Mixed	Office/ commercial & proposed multi-unit residential

It is noted that the 2012 flows and the 1996 flows are similar in magnitude. However, the 2008 flows are significantly less. Most likely this is a result of the land use proposed (or approved) at the time the study was prepared and may be based on the assumption that a majority of the property will be an office use.

116 West Main Street, Suite 201
St. Charles, Illinois 60174
Phone: 630.443.7755
Fax: 630.443.0533
www.wbkengineering.com

WILLS BURKE KELSEY ASSOCIATES

MEMORANDUM

Date: May 21, 2012

To: Chris Tiedt P.E.

CC: James Bernahl P.E.

From: Greg Chismark

Subject: Corporate Reserve Sanitary Sewer Study

This memo is in response to City staff comments regarding the sanitary sewer evaluation for the Corporate Reserve project. The goal of this supplement is to take a more refined look at the wastewater flows generated from the Corporate Reserve site. Although we took a conservative approach, City staff is concerned that the clubhouse and pool area has not been specifically accounted for in the analysis. The following documents were utilized:

- Improvements Phasing Plan Update for Fairgrounds / West Gateway Development dated January 1996
- Clubhouse Floor Plan prepared by BSB Design dated March 19, 2012
- Title 35 of the Illinois Administrative Code Part 370 – Recommended Standards for Sewage Works
- Title 15A North Carolina Administrative Code – Wastewater Design Flow Rates

Upon evaluation of the clubhouse floor plan we identified three separate uses. These uses include the pool, the social room/fitness room and the office area. We have assumed these uses would occur daily and throughout the year. This is a very conservative assumption but a good starting point. The flow generate rates were taken from both the Illinois and North Carolina Administrative Codes. The North Carolina Administrative Code was utilized to establish a flow rate for the pool and fitness areas because the Illinois Administrative Code does not address these uses. The estimated flow rate for the clubhouse facility is 2,100 gpd or 21 P.E.

We also verified the residential unit count and flows. Based on a rounding error the entire residential component could generate 72,100 (721 P.E) in comparison to the 71,250 (712.5 P.E.) originally estimated. This is an increase of 850 gpd or 8.5 P.E.

Finally, we re-evaluated the 7.5 acres of vacant commercial land use adjacent to Main Street (IL 64). The original estimate used a very conservative flow generation rate of 20 P.E./acre. This is 5 P.E./acre greater than the rate used in the original Fairgrounds / West Gateway Development Improvements Phasing Plan. It is reasonable to adjust flow rates for the commercial areas utilizing the original flow generation rates. The resultant is a reduction of 3,750 gpd or 37.5 P.E.

Taking into account all the afore-noted adjustments to total flow from the project can be reduced by 800 gpd or 8 P.E. We recommend the originally calculated flow rates and analysis remain unchanged as a conservative approach.

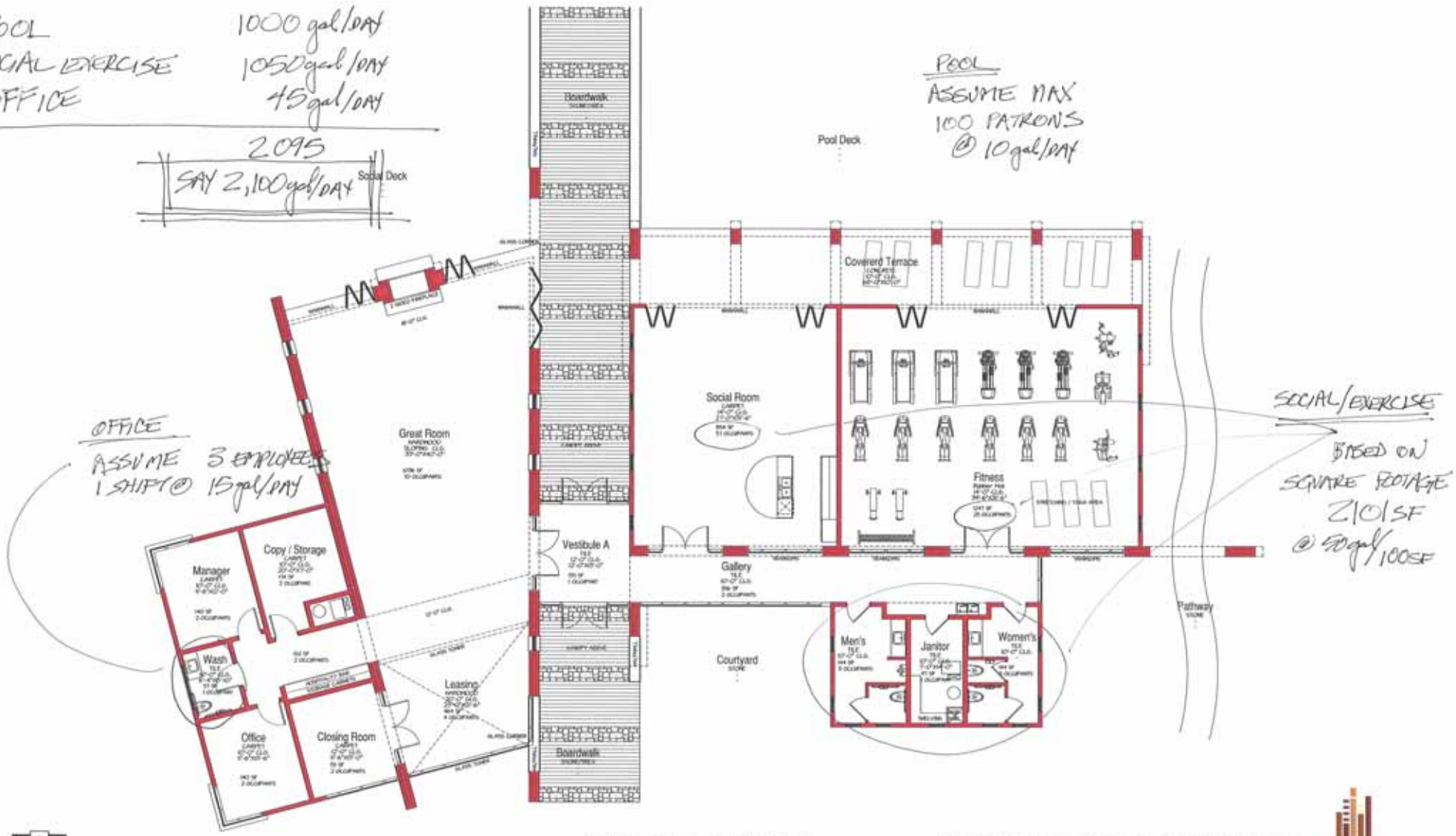
POOL 1000 gal/DAY
SOCIAL EXERCISE 1050 gal/DAY
OFFICE 45 gal/DAY

2095
SAY 2,100 gal/DAY

POOL
ASSUME MAX
100 PATRONS
@ 10 gal/DAY

OFFICE
ASSUME 3 EMPLOYEES
1 SHIFT @ 15 gal/DAY

SOCIAL/EXERCISE
BASED ON
SQUARE FOOTAGE
2101 SF
@ 50 gal/100 SF



Clubhouse - 5790 GSF

The Corporate Reserve of St. Charles
St. Charles, Illinois

JCF REAL ESTATE

BSB DESIGN

03-19-2012

Tributary To Renoux Manor Lift Station: Existing Condition Residential					
Area	Manhole Location	Single Family Units	Multi Family Units	Flow Per Unit (GPD)	Total Flow (GPD)
Renaux Manor Unit 1 & Artesian Springs	7.3018	152	-	350	53,200
Renaux Manor Unit 2[2]	To Lift Station	-	35	1200	42,000
Renaux Manor Unit 2[2]	7.3018	-	29	1200	34,800
Renaux Manor Unit 3	7.4002	117	-	350	40,950
Remington Glen[1]	7.3083	-	26	-	36,050
Autumn Leaves Assisted Living[1]	7.3081	-	1	6000	6,000
Pine Ridge & Regency Estates[1]	To Lift Station	-	-	-	56,900
Assisted Living[3]	To Lift Station	-	1	12000	12,000
Total Daily Flow for Residential					281,900

Notes:

1) Total flow value based on information obtained from IEPA permit supplied by the City of St. Charles

2) Renaux Manor Unit 2: 1 Multi Family Unit = 4 3-BR units. See calculation sheet for breakdown of flow per unit (gpd)

3) Assisted Living: Complex located off of IL Rt 64. Estimated flow (gpd) based on two times the value of Autumn Leaves Assisted Living

Tributary To Renoux Manor Lift Station: Existing Condition Non-Residential						
Building	Manhole Location	Use	Acres	Employees or PE/acre	GPD/Employee (GPD)	Total Flow (GPD)
Walgreens[2,4]	7.3032	Commercial	-	73	15.00	1,095
Corporate Reserve - north[3]	6.3196	Office Buildings	0.4	70	15.00	1,045
Corporate Reserve - central[3]	6.3198	Office Buildings	0.4	70	15.00	1,045
Corporate Reserve - south[3]	6.3194	Office Buildings	0.6	105	15.00	1,568
Corporate Reserve - vacant west[1]	6.3192	Commercial	4.2	~~20~~ 15	-	~~8,400~~ 6,300
Corporate Reserve - vacant east[1]	6.3189	Commercial	3.3	~~20~~ 15	-	~~6,600~~ 4,950
Vacant Lot[1]	6.3105	Commercial	2.0	20	-	3,960
Valley Springs Auto[3]	7.3032	Commercial	-	-	-	3,000
Main Street Center[3]	7.3087	Office Buildings	-	-	-	3,200
Westgate[2]	7.3032	Commercial	-	-	-	2,400
The Bike Rack & Adjacent Commercial[3]	To Lift Station	Commercial	0.8	132	15	1,986
Fire Station[3]	To Lift Station	-	0.2	35	15	523
Total Daily Flows for Non-Residential						34,823

$\Delta = -3750$ gpd/acre

37.5 PE

Notes:

1) Area in acres measured by planimeter. 20 PE/acre used as conservative estimate for projected future use

2) PE value taken from issued IEPA permits supplied by the City of St. Charles

3) Number of employees based on 1 person per 250 square feet

4) Total flow based on IEPA permit; 73 estimated employees

Tributary To Renoux Manor Lift Station: Proposed Condition Residential (Corporate Reserve of St. Charles Ph II)					
Area	Manhole Location	Single Family Units	Multi Family Units	Flow Per Unit (GPD)	Total Flow (GPD)
Corporate Reserve - proposed	6.4062	-	13	4750	61,750
Corporate Reserve - proposed	6.3194	-	2	4750	9,500
Total Daily Flow for Residential					71,250

Notes:

1) 1 Multi Family Unit = 1 studio, 11-1BR, 10-2BR units. See calculation sheet for breakdown of flow per unit (gpd)