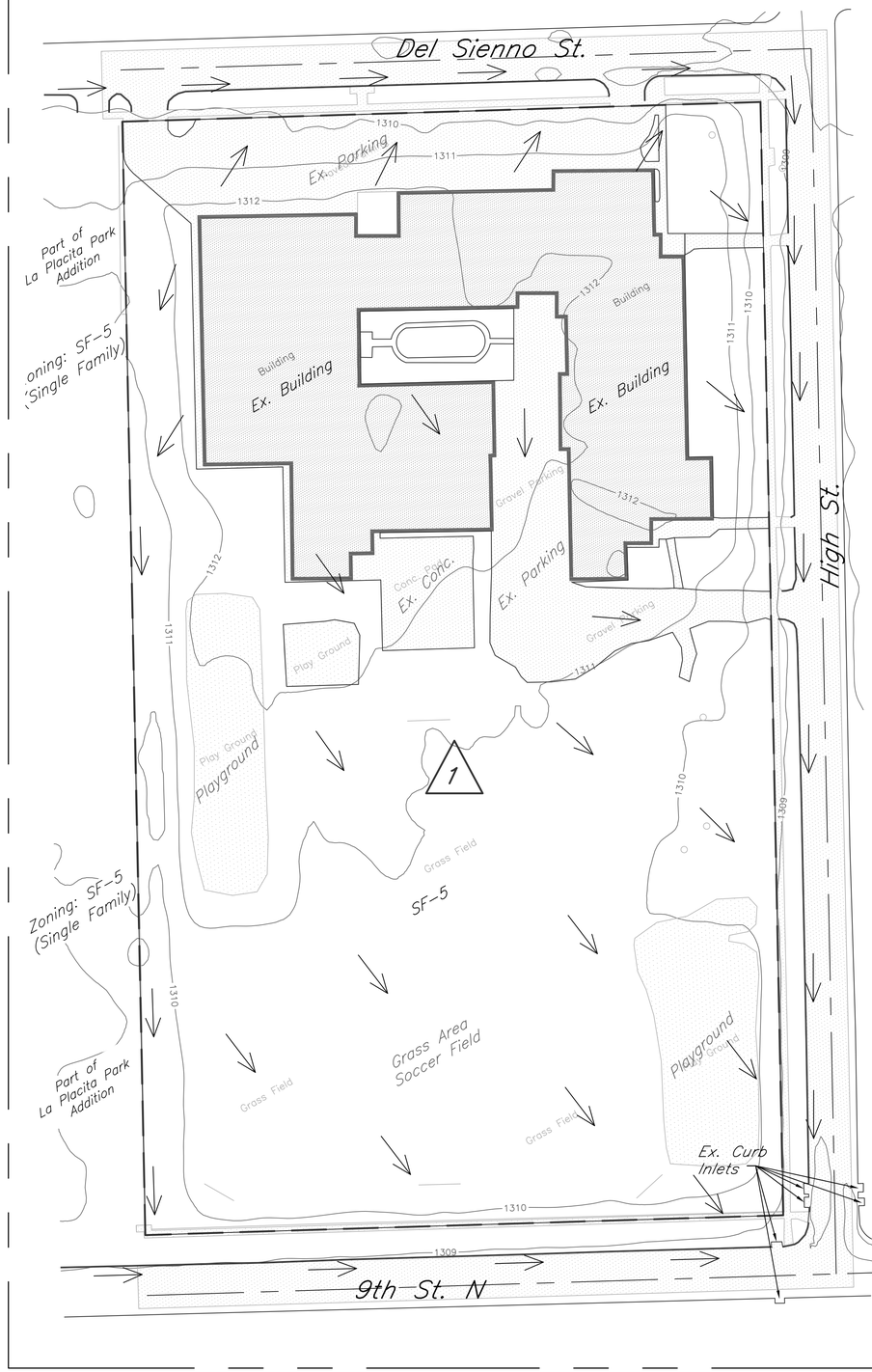

1 *Onsite drainage basin, draining to SWS inlets at NE at corner of 9th and High St.*
Area = 5.48 acres

Drainage Basin Boundary

Flow Arrows

October 31, 2012

Project Narrative:
The site is located at the northwest corner of 9th and High St. The site is developed and has school building, parking lot and playground. The south part of the property has playground and soccer field covered with grass. The proposed site consists of addition of classrooms into the existing building. Approximately 3000 SF of impervious area will be added. The existing drainage pattern indicates that the entire property drains to the inlets at 9th and High St as shwon by flow arrows. The proposed drainage pattern will follow the existing conditions.

Water Quality and TSS Removal

No water quality and TSS removal is expected as the total site disturbance is less than an acre. However stormwater water quality needs to be addressed if the cumulative soil disturbance reaches 1.0 acre or more in future.

Channel Protection

No extended detention for channel protection is required as the total site disturbance is less than 5.0 acres.

Flood Control, Flow Calculations (2–, 5–, 10–, 25– and 100–yr)

No flood detention for this site is excepected as the total impervious area added is very insignificant to cause adverse impact. Following tables show the drainage basin and corresponding flow and change of flow from existing to proposed condition. The southwest portion of the drainage basin drains along the the residential property line. A flood detention and/or extension of SWS at 9th and High is required if any future development on soccer field result in increase in runoff.

EXISTING CONDITION:
Total Site Area, A1 = 5.48 acres,
Total Impervious. Area= 1.87 acres,
Playground Area= 0.37 acres
Grass Area= 3.24 acres
Hydrological Soil Group = B

EXISTING SITE									
DRAINAGE AREA	ACRES	Tc min	CN	Q2	Q5	Q10	Q25	Q100	REMARKS
Onsite, Area 1	5.48	24	86	11.43	16.27	19.69	24.10	32.40	Entire Site draining into Inlets at 9th and High.

DEVELOPED CONDITION:
Total Site Area, A1 = 5.48 acres,
Total Impervious Area =1.97 acres,
Playground Area= 0.37 acres
Grass Area= 3.14 acres
Hydrological Soil Group = B

DEVELOPED SITE									
DRAINAGE AREA	ACRES	Tc min	CN	Q2	Q5	Q10	Q25	Q100	REMARKS
Onsite, Area 1	5.48	24	87	11.87	16.74	20.16	24.57	32.86	Entire Site draining into Inlets at 9th and High.

Engineer's Notes:

1. *Site drainage calculations were developed using the SCS Method for peak flow. Weighted CN and I values were established based on existing and proposed site conditions.*
2. *The site drainage will be maintained as existing condition. Drainage basin will remain same in developed condition.*
3. *No offsite area drains to or through the property.*
4. *The stormwater quality (WQV) needs to be addressed if the future development results in cumulative area of disturbance equals or exceeds 1.0 acre.*
5. *The stormwater quantity (flood detention) needs to be addressed if the future development results in cumulative impervious area equals or exceeds 1.0 acre.*
3. *Any future grading shall follow the drainage pattern as shown on plan indicated by flow arrows.*
4. *Storm sewers at 9th and High street needs to be extended to the site if there is significant addition of impervious area (in existing grass area) resulting in increase in Q. A hydraulic analysis for downstream pipe capacity my be required to handle the significant increase in Q.*
5. *There is no sign of wetland and the property is not in the 100 yr floodplain. (FIRM Panel 20173C0335E, February, 2 2007.)*
6. *The drainage plan is developed based on existing and xxxx SF of impervious area added to it. Flood detention and or storm sewer extension may be required if future development (impervious area) is on the existing south soccer filed.*

Black Elementary School Addition
Drainage Plan
Wichita, Kansas

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PROJECT NUMBER			
KEM NO. 12072	FILE	DATE 10/2012	SHEET 1.0
DESIGN GP	DRAWN GP	REVISED	