

**Project Narrative:**  
 The site is located at the southeast corner of Harry and Gordon Ave. The site is developed and has school building, parking lot and playground. The west 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 north 2.74 acres drains to the inlets in Harry St. East 0.56 acres drains to the Edwards and rest of the property drains to the Gordon as shown in plan. 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 expected 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 residential property line. A flood detention and/or extension of SWS is required if any future development on open grass field result in increase in runoff.

**EXISTING CONDITION:**  
 Total Site Area, A1 = 5.41 acres,  
 Total Impervious Area = 2.51 acres,  
 Playground Area = 0.30 acres  
 Grass Area = 2.60 acres  
 Hydrological Soil Group = B

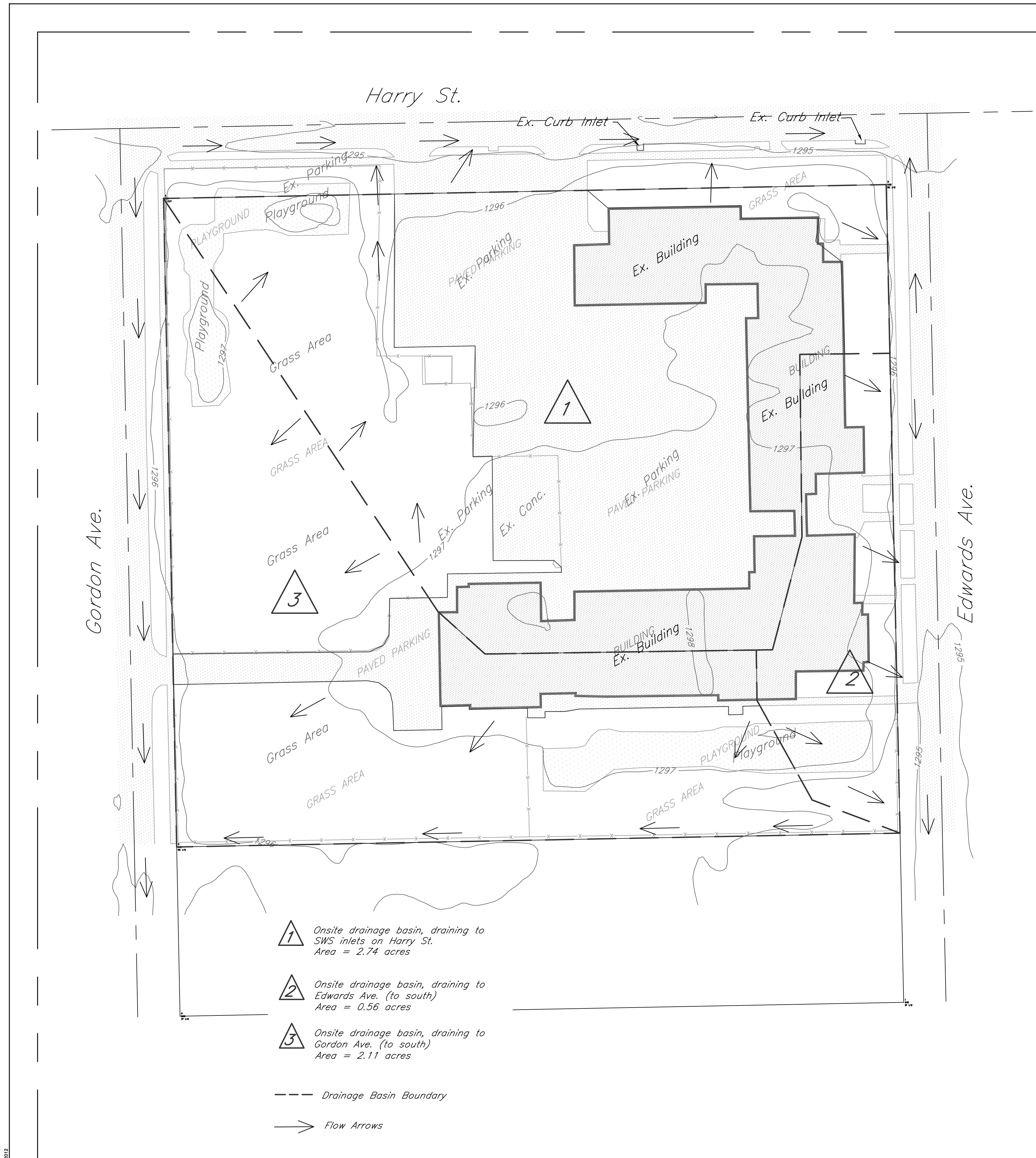
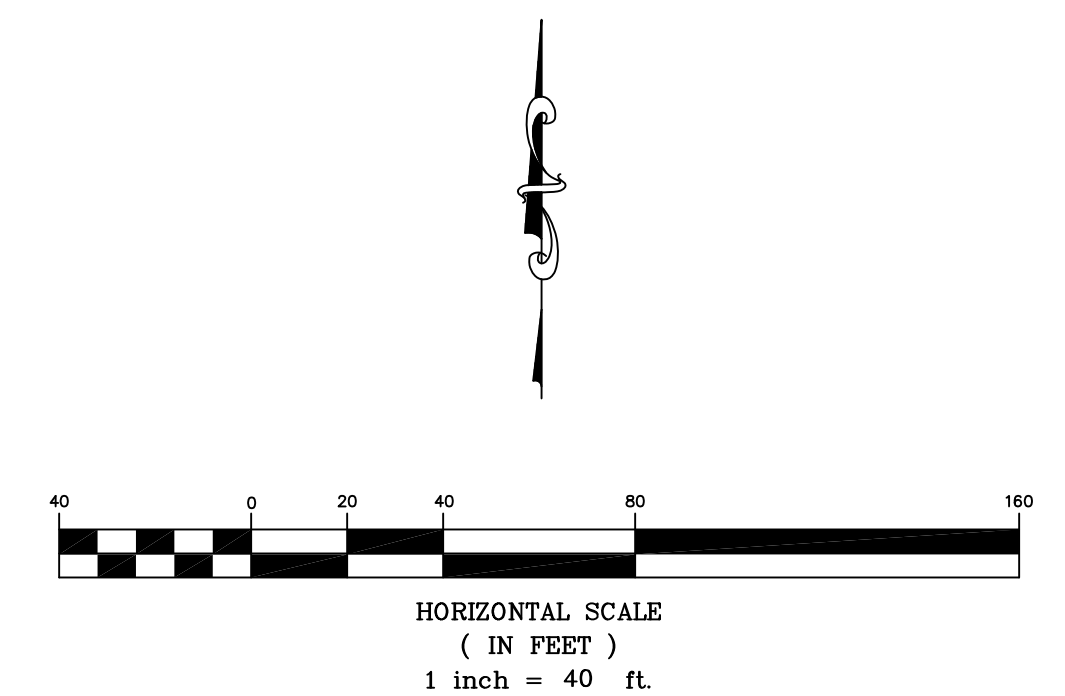
EXISTING SITE									
DRAINAGE AREA	ACRES	Tc min	CN	Q2	Q5	Q10	Q25	Q100	REMARKS
Onsite, Area 1	2.74	23	92	7.22	9.72	11.46	13.69	17.87	North basin draining into Inlet on Harry St.
Onsite, Area 2	0.56	15	84	1.39	2.01	2.45	3.02	4.1	Southeast basin draining into Edwards.
Onsite, Area 3	2.11	25	89	4.80	6.64	7.93	9.60	12.71	Southwest basin draining into Gordon St.

**DEVELOPED CONDITION:**  
 Total Site Area, A1 = 5.41 acres,  
 Total Impervious Area = 2.61 acres,  
 Playground Area = 0.30 acres  
 Grass Area = 2.50 acres  
 Hydrological Soil Group = B

DEVELOPED SITE									
DRAINAGE AREA	ACRES	Tc min	CN	Q2	Q5	Q10	Q25	Q100	REMARKS
Onsite, Area 1	2.74	23	93	7.43	9.92	11.65	13.87	18.03	North basin draining into Inlet on Harry St.
Onsite, Area 2	0.56	15	84	1.39	2.01	2.45	3.02	4.1	Southeast basin draining into Edwards.
Onsite, Area 3	2.11	25	90	4.96	6.81	8.11	9.76	12.85	Southwest basin draining into Gordon St.

**Engineer's Notes:**

- 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.
- The site drainage will be maintained as existing condition. Drainage basin will remain same in developed condition.
- No offsite area drains to or through the property.
- The stormwater quality (WQV) needs to be addressed if the future development results in cumulative area of disturbance equals or exceeds 1.0 acre.
- The stormwater quantity (flood detention) needs to be addressed if the future development results in cumulative impervious area equals or exceeds 1.0 acre.
- Any future grading shall follow the drainage pattern as shown on plan indicated by flow arrows.
- Storm sewers may need 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 conveyance may be required.
- There is no sign of wetland and the property is not in the 100 yr floodplain. (FIRM Panel 20173C0365E, February, 2 2007.)
- The drainage plan is developed based on existing and xxxx SF of impervious area added to it.



- ① Onsite drainage basin, draining to SWS inlets on Harry St. Area = 2.74 acres
- ② Onsite drainage basin, draining to Edwards Ave. (to south) Area = 0.56 acres
- ③ Onsite drainage basin, draining to Gordon Ave. (to south) Area = 2.11 acres

--- Drainage Basin Boundary  
 → Flow Arrows

DATE: 11/2012

Payne Elementary School Addition  
**Drainage Plan**  
 Wichita, Kansas

PROJECT NUMBER			
<b>kemiller</b> engineering	KEM NO. 12074	FILE	DATE 10/2012
516 S. Market, Wichita, KS 67202 (316)284-0242	DESIGN GP	DRAWN GP	REVISED

SHEET  
1.0