MEMORANDUM

To: Kathy Bodmer, City of Apple Valley

From: Scott McQueen, Wold Architects and Engineers

Date: September 7, 2017

Comm. No: 152264

Subject: Independent School District #196
Diamond Path Elementary School Parking
Requirement/Parking Study

As the District proposes development at its existing Diamond Path Elementary School to implement improved safety and security at its entrance, the proposal includes a 6,700 square foot addition of four classrooms to replace the four classrooms that will be lost in their conversion to place the School's main office in the southeast corner of the building directly adjacent to the front door to promote security and welcoming.

The relocated office means that the former office space will be converted to two additional classroom-sized rooms to allow the current school operations to be less cramped and to better align with current District space standards.

This project has a minor net effect on capacity that, at most, could be counted as two additional classrooms.

In review of Apple Valley City ordinances, we understand there is not a specific parking requirement for a school building type. We do understand that the city staff have come up with a guideline that suggests one parking stall for every four students in building capacity plus one stall for every three staff. This calls for 219 parking stalls based upon the proposed changes. We have found this guideline to be unrealistic based upon current elementary school projects in adjacent municipalities within District #196.

Using Diamond Path Elementary, whose student population is 765 students, 81 staff members, and 31 classrooms, we can compare the variety of municipalities.

Municipality	Requirement/Guideline	Resulting Stall Count
Apple Valley	One Stall per 4 Students One Stall per 3 Staff	219 Stalls
Rosemount	One Stall per 20 Students One per classroom	70 Stalls
Eagan	No requirement per individual review	TBD Stalls
Lakeville	One Stall per 7 Students	110 Stalls
Burnsville	One Stall per 2 classrooms One Stall per Staff member	94 Stalls

*Note: Actual stalls – 138
Actual use – +/- 87 (see available stalls analysis)

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We have also found the Apple Valley guideline to be in excess of what is found at every public elementary school site in Apple Valley.

School	AV Guideline	Actual	Deficit?
Diamond Path	219	138	81
Westview	197	103	94
Cedar Park	207	85	122
Highland	189	78	111
Greenleaf	242	134	108
Southview	213	97	116

We understand that schools often are unique facilities that require individual review and as such are often "conditional use." We also acknowledge there are a handful of events each year in which an elementary school can never have enough parking, such as:

- Open house/Conferences
- Grandparents Day
- Large Celebrations

As for daily use of an elementary school and the parking needs, there is a daily pattern, which is fairly consistent throughout the year that can be studied.

In anticipation of improvements at Diamond Path Elementary School, the District tracked actual counts of available stalls in the lot, four times a day, for four days near the end of last school year to observe and record available stalls. The following table contains that data.

Available Parking Stalls					
Day	**8:15 AM**	**10:15 AM**	**2:00 PM**	**3:30 PM**	**Daily Average**
Thursday, June 1	49	33	43	45	42.5
Friday, June 2	65	54	50	47	54
Monday, June 5	56	53	48	49	51.5
Tuesday, June 6	48	50	51	49	49.5
Averages	54.5	47.5	48	47.5	**49.375**

The current configuration at Diamond Path Elementary is 138 spaces with an average of 49 stalls available throughout the day. It would seem that there is adequate parking at the site currently to address any potential demand due to the proposed development despite the recommended guideline discussed previously. It appears the average daily demand is around 87 stalls for a current student population of 765. We would project a post-development capacity of approximately 813 students; therefore, parking in excess of 93 stalls would appear to be sufficient, if we assume proportionality and compare to similar district facilities.

Concurrent with the addition and entrance project, the District is proposing to reconfigure the location of bus drop-off and parent drop-off to provide additional safe separation of parents and buses, as well as pedestrians. Currently there is significant conflict between buses and parents along the entry drive in the afternoon (due to the daily attempt to leave a lane free for buses that is along the west side of the driveway curb). The revised layout flips buses to the south lot and keeps parents to the north lot, which is far more intuitive for parents and visitors, and allows for a significant parent queue to reside along the west curb (as parents often arrive 45 minutes early in the afternoon, ahead of buses). This proposed reconfiguration also results in some parking loss overall.

The design as submitted indicates a total parking capacity of 111 cars. This exceeds our observed demand and our calculated need by approximately 18 cars.

The new bus corral is intended to be exclusively for buses and staff during morning drop-off and evening pick-up, but it is recognized that at other times of the day, and certainly in the evenings and weekends, it can also serve as additional parking capacity to serve the community.

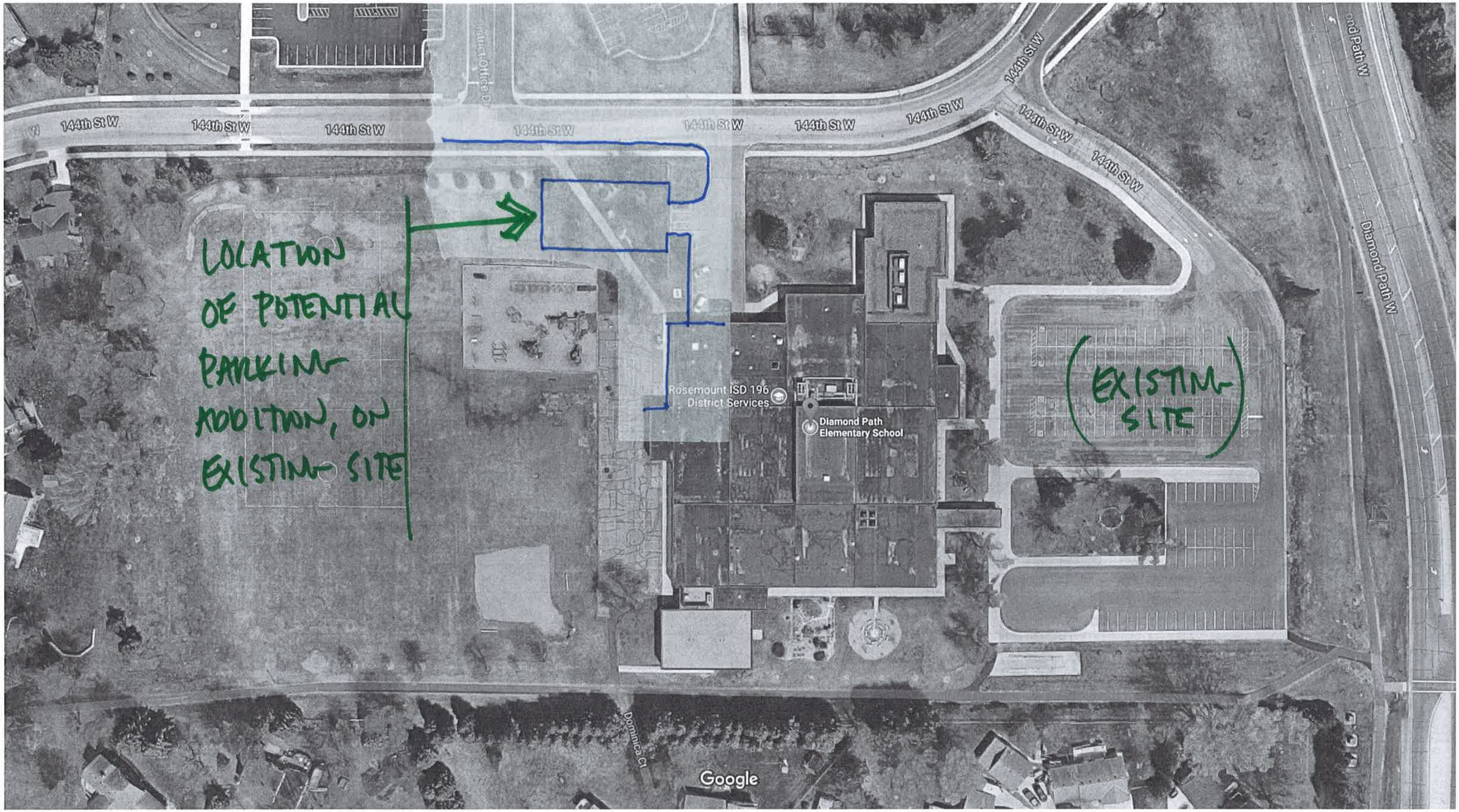
We have developed this recommendation with our clients at District #196 and they believe this proposal adequately meets their needs. The data we were able to gather, and what we have experienced planning dozens of elementary schools, seems to support this proposal.

Let us know if you have any follow-up questions or concerns.

cc: Jeff Solomon, ISD #196
Douglas Kahl, Wold

MF/ISD_196/152264/crsp/aug17

Google Maps Diamond Path Elementary School



Imagery ©2017 Google, Map data ©2017 Google United States 50 ft

MN

LEGEND

- PROPOSED CONCRETE WALK
- PROPOSED HEAVY DUTY BITUMINOUS PAVEMENT
- PROPOSED STREET BITUMINOUS PAVEMENT
- PROPOSED TRAFFIC CONTROL SIGN
- PAINTED ACCESSIBLE SYMBOL
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED GATE VALVE (GV)
- PROPERTY LINE

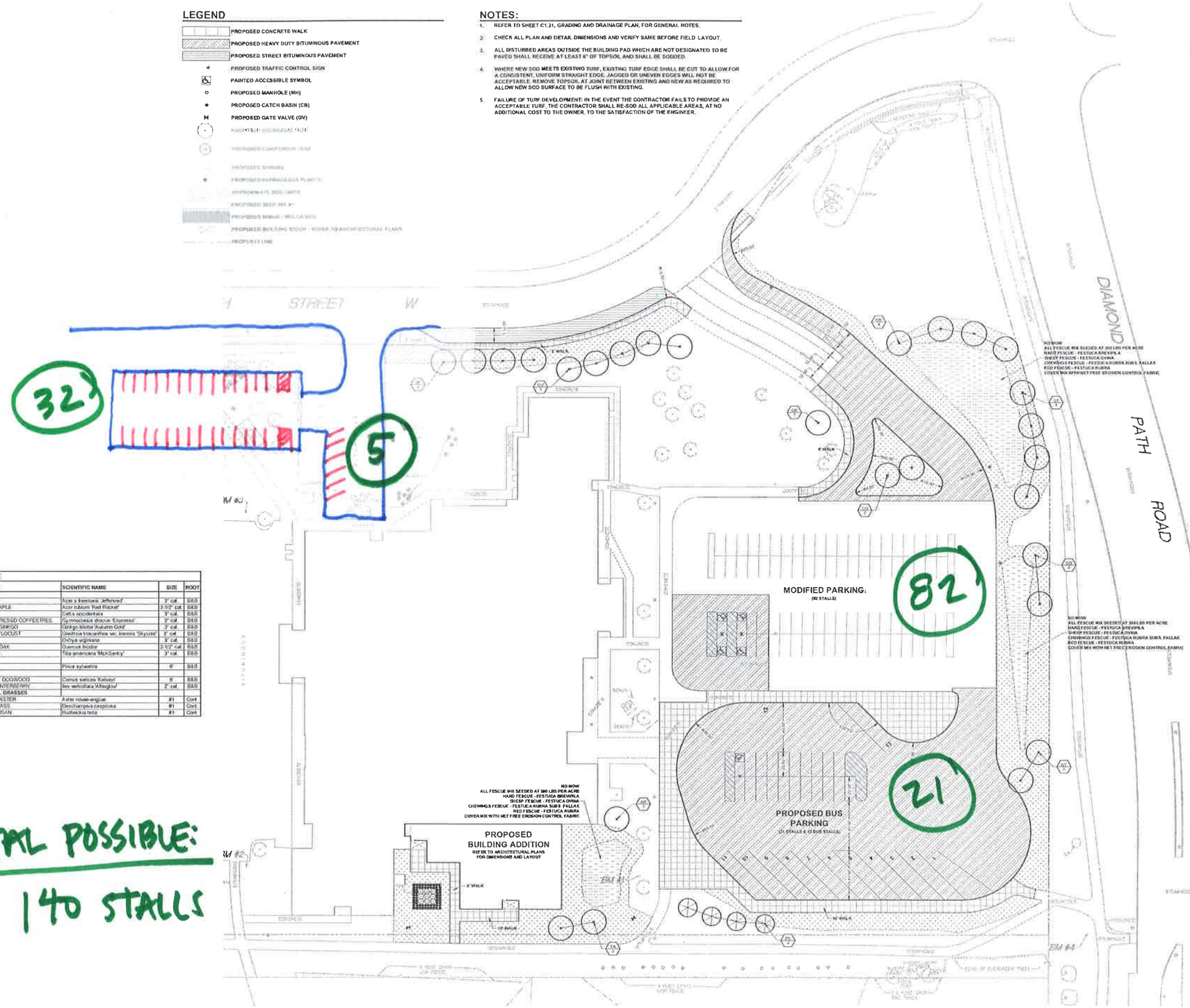
NOTES:

1. REFER TO SHEET C1.31, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
3. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD WHICH ARE NOT DESIGNATED TO BE PAVED SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SODDED.
4. WHERE NEW SOD MEETS EXISTING TURF, EXISTING TURF EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.
5. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, THE CONTRACTOR SHALL RE-SOD ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER.

PLANT SCHEDULE

SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	ROOT
DECIDUOUS SHADE TREES				
AF	AUTUMN BLAZE	Acer x freemanii 'Jeffersred'	3" cal.	B&B
AR	RED ROCKET MAPLE	Acer rubrum 'Red Rocket'	2-1/2" cal.	B&B
CO	HACKBERRY	Celtis occidentalis	3" cal.	B&B
GD	KENTUCKY ESPRESSO COFFEETREE	Gymnocladus dioicus 'Espresso'	3" cal.	B&B
GS	AUTUMN GOLD GINKGO	Ginkgo biloba 'Autumn Gold'	3" cal.	B&B
GT	SKYLINE HONEYLOCUST	Gleditsia triacanthos var. inermis 'Skyline'	3" cal.	B&B
OV	IRONWOOD	Ostrya virginiana	3" cal.	B&B
QB	SWAMP WHITE OAK	Quercus bicolor	2-1/2" cal.	B&B
TA	SENTRY LINDEN	Tilia americana 'McKSentry'	3" cal.	B&B
CONIFEROUS TREES				
PS	SCOTCH PINE	Pinus sylvestris	6'	B&B
DECIDUOUS SHRUBS				
CS	KELSEY DWARF DOGWOOD	Cornus sericea 'Kelseyi'	5'	B&B
IL	APPEALOW WINTERBERRY	Ilex verticillata 'Afterglow'	2" cal.	B&B
PERENNIAL/ORNAMENTAL GRASSES				
AN	NEW ENGLAND ASTER	Aster novae-angliae	#1	Cont.
DC	TUFTED HAIRGRASS	Deschampsia cespitosa	#1	Cont.
RH	BLACK-EYED SUSAN	Rudbeckia hirta	#1	Cont.

TOTAL POSSIBLE:
140 STALLS



Diamond Path Elementary Building Addition
14455 Diamond Path
Apple Valley, MN 55124

Independent School District 196
3455 153rd St. West
Rosemount, MN 55068

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ANDERSEN - JOHNSON ASSOCIATES, INC. AJA

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota

DAVID A. REY
Registration Number 49180 Date 09/18/2017

Revisions		
Description	Date	Num

Comm: 152264
Date: 09/18/2017
Drawn: JCL
Check: DAR
North

Site Plan

Scale: 1" = 30'

C1.21