**To:** Members of the Plan Commission

**From:** Tom Vander Woude, Planning Director

**Date:** September 6, 2019

**Re:** **DEVELOPMENT PLAN REVIEW**
PC Docket No. 19-006 Don Torrenga of Torrenga Engineering, Inc. on behalf of CAL-MAIN Crossing LLC, Rohit Patel, approval of a development plan for a Kiddie Academy Educational Child Care and office building at 10419 Calumet Avenue.

---

**Applicant:** Don Torrenga of Torrenga Engineering, Inc.

**Property Owner:** CAL-MAIN Crossing LLC, Rohit Patel

**Property Address:** 10419 Calumet Avenue

**Current Zoning:** C-1 – Highway-Oriented, General Business District

**Adjacent Zoning:**
North: PUD
South: PUD
East: PUD
West: C-1

**Additional Actions Required:** Approval of Findings of Fact

**Attachments:**
Cover letter prepared by Donald C. Torrenga dated 07.26.2019
Kiddie Academy Traffic Flow analysis
**Revised** Kiddie Academy 10419 Calumet Avenue Plan Set prepared by Torrenga Engineering, dated 08.27.2019
**Revised** Color Renderings of proposed building prepared by Baker Architects dated 08.30.2019
**Revised** Exterior Elevations of proposed building prepared by Baker Architects dated 08.30.2019
Alumi-Gard fence brochure identifying playground and building fencing
Ashland Privacy Fence Technical Specification sheet (to be installed on the north and east edge of the property)
Monument Sign and Dumpster rendering prepared by Baker Architects dated 07.29.2019
Light fixture spec sheets – various

## Background

In February of 2018, the Munster Plan Commission approved plans for a two-story, 28,791 square foot Kiddie Academy day care and office building at 10419 Calumet Avenue. The subject property is a 1.5 acre undeveloped parcel of land that was resubdivided as Lot 1A of Main Crossing Lot 1 in early 2017. It is located directly east of the Dunkin Donuts development. Since receiving approval, CAL-MAIN Crossing, LLC has since revised their plans, placing both uses on the ground floor and eliminating the second story.

They are now proposing a 19,450 square foot building with the two uses separated into two separate wings.

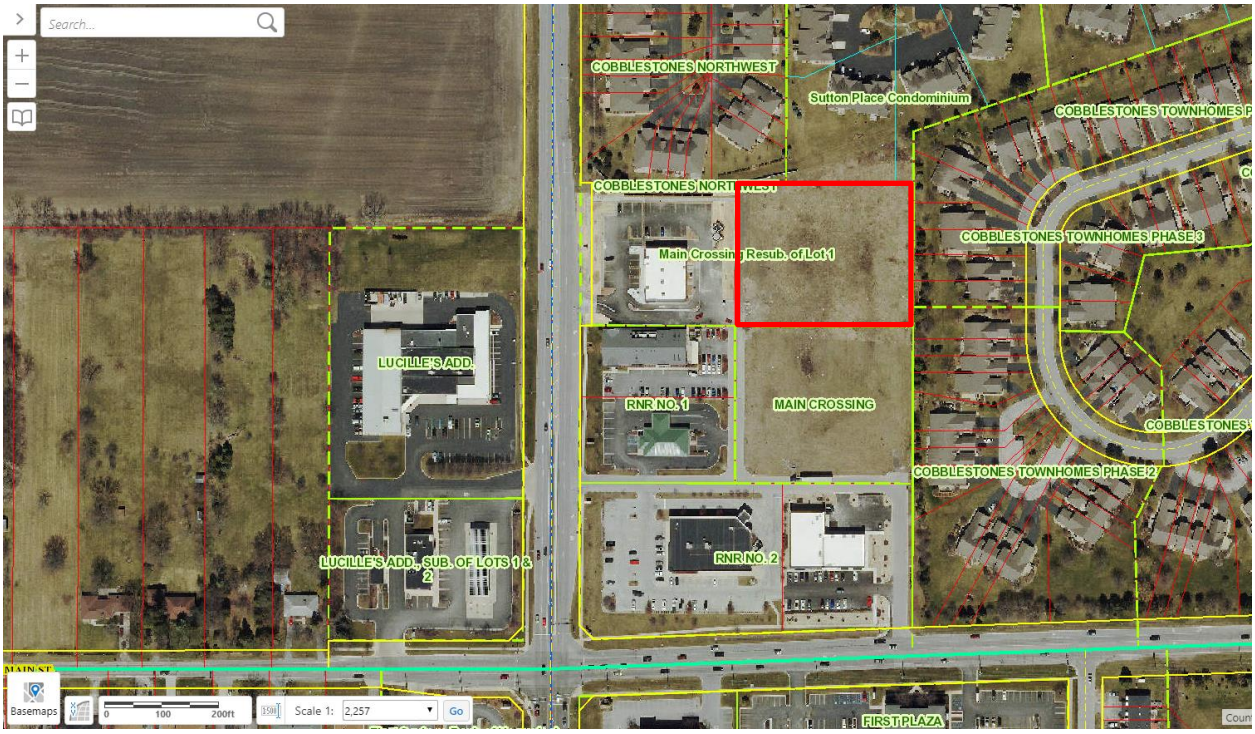


*Figure 1: Subject property*

The building will contain 10,000 SF devoted to the Kiddie Academy day care and 9,450 square feet of office space. The site also includes an approximately 8,500 square foot fenced-in play area for use by the Kiddie Academy students. The property does not front on a public street, but can be accessed by way of an ingress-egress easement along the south end of Lot 2A (Dunkin Donuts), which will be extended east into the development for a future connection to Main Street, or by an ingress-egress easement that extends south through the adjacent commercial lots.

The Kiddie Academy is a franchise early education/day care, which will be owned by Rohit Patel and his partners. It provides services to children from infants to 12 years old. The stated capacity of this facility will be 180 children. The proposed hours are 6:00 AM to 6:30 PM, with most children dropped off between 6:00 AM and 9:00 AM and picked up between 3:00 AM to 6:00 PM. There is no drop off area in the parking lot, because parents are expected to park and walk their children into the building.

The building will be reviewed in detail by the Indiana State Fire Marshal to ensure compliance with all state day care regulations. The building has been designed to meet these requirements which include, for example, a minimum amount of floor space and playground space per child. The project must demonstrate full compliance with state requirements prior to issuance of any building permits by the Town of Munster.

**A hearing was held before the Plan Commission on August 13, at which the request was tabled. Since the August hearing before the Plan Commission, the following has occurred:**

1. The Town Council approved a special use permit upon the conditions that the special use permit is granted exclusively to Kiddie Academy and is not transferrable to any other operator and the development plan is approved by the Plan Commission.

2. The plans have been revised to address the planning and engineering comments identified in the August staff report.

3. The building plans have been revised to include additional column and brick details.

**Analysis**

Zoning
The current zoning is C-1 Highway Commercial. Both day care and business offices are permitted uses.

Parking
The petition meets the minimum off-street parking requirements.

- Required off-street parking for day care facilities: 1 per employee
- Required off-street parking for offices —business, professional, governmental and public assembly units: 3.3 spaces per 1,000 square feet of floor area.
- The developer is providing 55 parking spaces:
    - 21 required for the day care
    - 32 required for 9,450 square feet of office space
    - 2 additional

Pedestrian Access
Sidewalks are provided on the north and west sides of the development connecting to the existing pedestrian network.

Stormwater
The drainage and grading plans have been reviewed by the Town Engineer and have been found to be satisfactory for the purposes of stormwater.

Landscaping
The proposed landscaping plan meets the requirements for perimeter parking lot landscaping. Trees are planted at the required ratio of 1 per 30 feet of linear frontage. In addition, there is landscaped berm on the adjacent properties to the north and east that provides a landscaped screen. The play area and the sidewalk are surrounded respectively by 5' and 4' ornamental aluminum fencing.

The internal parking lot landscaping requirement is not clearly met by the plans. Staff has asked for additional information to be included in the landscaping plan to verify that the requirement is met.

The Town zoning ordinance also requires an 8 foot high fence between commercial and residential districts. This requirement has not been enforced consistently however, and in some cases, a berm has been permitted as a substitute. The petitioners have provided spec sheets for both types of fencing.

Building

Materials proposed for the building meet Town standards: brick, stone, metal, and glass. The revised plans include additional column details on the elevations. The dumpster enclosure is constructed of the same materials. The rooftop mechanicals will be screened by a parapet.

Lighting
A photometric plan and spec sheets of lighting fixtures have been provided. All light fixtures are fully shielded or full cut-off. The photometric plan indicates that there will be no light escaping the site. Staff has recommended that the color of the light fixtures be no greater than 3000 Kelvin (K) – this will reduce the amount of harsh glare and produce a warmer light which is more compatible with the adjacent residential properties.

Signs
The petitioner proposes a wall sign and a monument sign. The proposed signage meets the Town ordinance with respect sign types and materials. The petitioner has not provided exact dimensions, but they must comply with the Munster sign code.

**Recommendation**

The Plan Commission may wish to consider the following motion:

*Motion to approve PC Docket No. 19-006 granting approval of a development plan for a Kiddie Academy Educational Child Care and office building at 10149 Calumet Avenue*.

# Torrenga Engineering, Inc.

REGISTERED PROFESSIONAL ENGINEERS
**907 RIDGE ROAD**
**MUNSTER, INDIANA 46321**

**www.torrenga.com** **Office (219) 836-8918** **Fax (219) 836-1138**


July 26, 2019

Mr. Thomas Vander Woude, AICP
Planning Director
Town of Munster
1005 Ridge Road
Munster, Indiana 46321

Mr. Vander Woude,

The owners of the property located at 10419 Calumet Avenue, CAL-MAIN Crossing, LLC are requesting the Plan Commission to approve the construction of a single story 19,450 square foot building for them to operate a Kiddie Academy Child Care Center and some rentable office space. Kiddie Academy is a national organization with a focus on leadership in education-based child care. Kiddie Academy is an accredited organization from the National Association for the Education of Young Children (naeyc) and the National Early Childhood Program Accreditation (NECPA).

The issue was presented by the Board of Zoning Appeals that the parking spaces in the complex will be extremely taxed based upon the proposed parking lot layout. The proposed layout conforms with the requirement as specified in the Codes and Ordinances of the Town of Munster.
The office space will be rented to businesses that generate very low traffic counts. In addition the National Kiddie Academy Organization has accumulated parking allotment traffic flow counts throughout the day at various locations around the country. The maximum number of parking spaces that are utilized for a facility with a capacity of 166 children is 27 between the hours of 8:50 and 9:00 am. Please refer to the attached “Traffic Flow” counts generated by the National Kiddie Academy Organization from existing facilities. The proposed parking lot has a maximum capacity of 55 which leaves 28 additional unused spaces for the offices to use.

The Developer and Kiddie Academies National Organization believe that the number of parking spaces in the lot is more than adequate to service this building.

Sincerely,

Donald C. Torrenga, PE
Torrenga Engineering, Inc.

# TRAFFIC FLOW

## HOURS OF OPERATION: 6:30 AM - 6:30 PM

**CAPACITY** 166

**PARENT PARKING**

**DROP OFF AM**

| Time | Children Drop off | Cumulative Children | Number of Cars | Times | Children Drop Off | Cumulative Children | Number of Cars |
|---|---|---|---|---|---|---|---|
| 6:30 - 6:40 | 3 | 3 | 2 | 8:00 - 8:10 | 14 | 85 | 10 |
| 6:40 - 6:50 | 4 | 7 | 3 | 8:10 - 8:20 | 14 | 99 | 10 |
| 6:50 - 7:00 | 5 | 12 | 4 | 8:20 - 8:30 | 13 | 112 | 9 |
| 7:00 - 7:10 | 7 | 19 | 5 | 8:30 - 8:40 | 13 | 125 | 9 |
| 7:10 - 7:20 | 8 | 27 | 6 | 8:40 - 8:50 | 13 | 138 | 9 |
| 7:20 - 7:30 | 9 | 36 | 6 | 8:50 - 9:00 | 12 | 150 | 8 |
| 7:30 - 7:40 | 10 | 46 | 7 | 9:00 - 9:30 | 8 | 158 | 6 |
| 7:40 - 7:50 | 12 | 58 | 8 | 9:30 - 10:00 | 5 | 163 | 4 |
| 7:50 - 8:00 | 13 | 71 | 9 | 10:00 - 10:30 | 3 | 166 | 2 |

**PICK-UP PM**

| Time | Pick up | Cumulative Children | Number of Cars | Time | Children Pick up | Cumulative Children | Number of Cars |
|---|---|---|---|---|---|---|---|
| 3:00 - 3:10 | 2 | 164 | 1 | 4:40 - 5:00 | 11 | 115 | 8 |
| 3:10 – 3:20 | 3 | 161 | 2 | 5:00 - 5:10 | 12 | 103 | 8 |
| 3:20 - 3:30 | 3 | 158 | 2 | 5:10 - 5:20 | 14 | 89 | 10 |
| 3:30 - 3:40 | 4 | 154 | 3 | 5:20 - 5:30 | 15 | 74 | 11 |
| 3:40 - 3:50 | 4 | 150 | 3 | 5:30 - 5:40 | 15 | 59 | 11 |
| 3:50 - 4:00 | 5 | 145 | 4 | 5:40 - 5:50 | 15 | 44 | 11 |
| 4:00 - 4:10 | 5 | 140 | 4 | 5:50 - 6:00 | 13 | 31 | 9 |
| 4:10 - 4:20 | 7 | 133 | 5 | 6:00 – 6:10 | 12 | 19 | 8 |
| 4:20 - 4:30 | 7 | 126 | 5 | 6:10 – 6:20 | 11 | 8 | 3 |
| 4:30 - 4:40 | 8 | 118 | 6 | 6:20 – 6:30 | 8 | 0 | 3 |

**PARENT AND STAFF PARKING**

**TOTAL (AM)**

| Time | Staff | Total Cars (Staff & Parents) | | Time | Staff | Total Cars (Staff & Parents) |
|---|---|---|---|---|---|---|
| 6:30 – 6:40 | 2 | 4 | | 8:00 – 8:10 | 11 | 21 |
| 6:40 – 6:50 | 3 | 6 | | 8:10 – 8:20 | 13 | 22 |
| 6:50 – 7:00 | 3 | 7 | | 8:20 – 8:30 | 14 | 23 |
| 7:00 – 7:10 | 4 | 9 | | 8:30 – 8:40 | 16 | 25 |
| 7:10 – 7:20 | 5 | 10 | | 8:40 – 8:50 | 17 | 26 |
| 7:20 – 7:30 | 6 | 12 | | 8:50 – 9:00 | 19 | 27 |
| 7:30 – 7:40 | 7 | 14 | | 9:00 – 9:30 | 20 | 26 |
| 7:40 – 7:50 | 8 | 17 | | 9:30 – 10:00 | 20 | 23 |
| 7:50 – 8:00 | 10 | 19 | | 10:00 – 10:30 | 22 | 23 |

| Mid-day | Maximum Total Cars |
|---|---|
| 10:30 – 3:00 | 18 |

**TOTAL (PM)**

| Time | Staff | Total Cars (Staff & Parents) | | Time | Staff | Total Cars (Staff & Parents) |
|---|---|---|---|---|---|---|
| 3:00 - 3:10 | 21 | 22 | | 4:40 - 5:00 | 14 | 21 |
| 3:10 – 3:20 | 21 | 22 | | 5:00 - 5:10 | 12 | 20 |
| 3:20 - 3:30 | 20 | 22 | | 5:10 - 5:20 | 11 | 20 |
| 3:30 - 3:40 | 20 | 22 | | 5:20 - 5:30 | 9 | 19 |
| 3:40 - 3:50 | 18 | 20 | | 5:30 - 5:40 | 7 | 18 |
| 3:50 - 4:00 | 17 | 20 | | 5:40 - 5:50 | 6 | 16 |
| 4:00 - 4:10 | 16 | 20 | | 5:50 - 6:00 | 4 | 13 |
| 4:10 - 4:20 | 16 | 20 | | 6:00 – 6:10 | 3 | 11 |
| 4:20 - 4:30 | 15 | 19 | | 6:10 – 6:20 | 3 | 6 |
| 4:30 - 4:40 | 14 | 19 | | 6:20 – 6:30 | 2 | 5 |

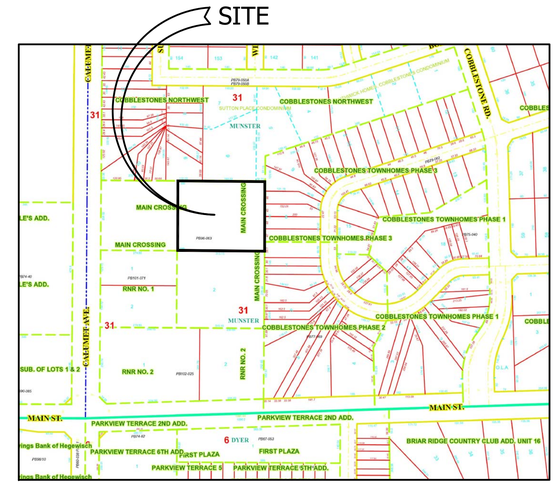
# KIDDIE ACADEMY

## 10419 CALUMET AVENUE
## MUNSTER, LAKE COUNTY, INDIANA

| INDEX | |
|---|---|
| PAGE | DESCRIPTION |
| COVER | TITLE PAGE |
| C–1.0 | EXISTING TOPOGRAPHY & UTILITIES |
| C–2.0 | SITE PLAN |
| C–3.0 | SANITARY SEWER & WATER MAIN PLAN |
| C–3.1 | STORM SEWER & GRADING PLAN |
| C–4.0 TO C–4.1 | DETAILS AND SPECIFICATIONS |
| C–5.0 | STORM WATER POLLUTION PREVENTION PLAN (SWPPP) – CONSTRUCTION |
| C–5.1 | STORM WATER POLLUTION PREVENTION PLAN (SWPPP) – POST CONSTRUCTION |
| C–6.0 TO C–6.1 | SWPPP DETAILS & SPECIFICATIONS |
| 1 OF 1 | LIGHTING PLAN |
| 1 OF 1 | LANDSCAPING PLAN |
| | |

LEGAL DESCRIPTION:

LOT 1A, RESUBDIVISION OF LOT 1, MAIN CROSSING, AN ADDITION TO THE TOWN OF MUNSTER, AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 110, PAGE 46 IN THE OFFICE OF THE RECORDER OF LAKE COUNTY, INDIANA.




VICINITY MAP

NORTH

NOT TO SCALE

NOTES:

1. TOTAL SITE AREA = 1.82± ACRES (79,111± S.F.)
2. THIS PROPERTY IS LOCATED IN FLOOD ZONE "X", AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD, AS TAKEN FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR MUNSTER, LAKE COUNTY, INDIANA, MAP NUMBER 18089C0119E, EFFECTIVE DATE JANUARY 18, 2012.
3. ALL VERTICAL DATUM IS BASED ON NAVD88.
4. HYDROLOGIC UNIT CODES: 07120003030030 – HART DITCH (PLUM CREEK)–DYER DITCH
5. LOCATION:
   LATITUDE – 41°31'29" N
   LONGITUDE – 87°30'27" W
6. CURRENT ZONING: C–1 COMMERCIAL
7. THE CONTRACTOR SHALL DEVELOP A STORM WATER POLLUTION PREVENTION PLAN SPECIFIC TO THIS PLAN SET AND SUBMIT TO THE TOWN OF MUNSTER FOR APPROVAL PRIOR TO CONSTRUCTION.
8. A PRECONSTRUCTION CONFERENCE SHALL TAKE PLACE PRIOR TO ANY CONSTRUCTION WITH THE TOWN OF MUNSTER, CONTRACTOR AND REPRESENTATIVES OF THE OWNER.

Indiana 811

Know what's **below.**
**Call** before you dig.

"IT'S THE LAW"
*CALL 2 WORKING DAYS BEFORE YOU DIG*
***811 or 1-800-382-5544***
*CALL TOLL FREE*
*PER INDIANA STATE LAW IC8–1–26.*
*IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.*


DEVELOPER:
Baker & Associates, Architects
673 High Street
Worthington, OH 43085

ENGINEER:
Torrenga Engineering, Inc.
907 Ridge Road
Munster, Indiana 46321
(219) 836–8918


Date and Revisions:

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| 3 | 08-27-2019 | ENGINEERING REVIEW REVISIONS | DT |
| 2 | 08-09-2019 | ENGINEERING REVIEW REVISIONS | DT |
| 1 | 07-26-2019 | PRIMARY SUBMITTAL | DT/LP/EM/EG |

NORTH

DRAWING SET PROGRESS:

- [x] ENGINEERING PLAN - FOR REVIEW / APPROVAL
- [ ] FINAL ENGINEERING - FOR CONSTRUCTION

CERTIFIED BY: DONALD C. TORRENGA
P.E. # 19868

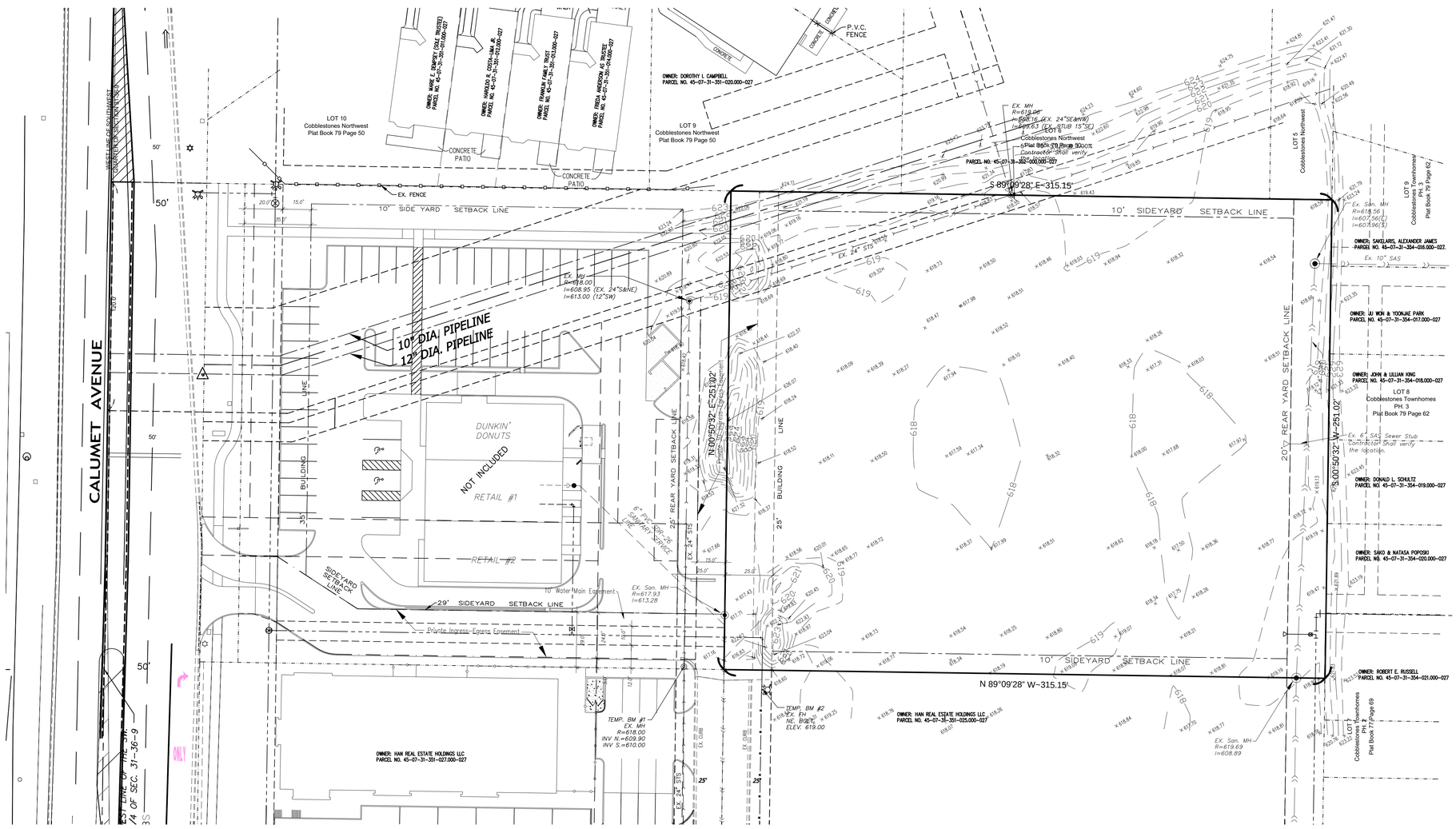
DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

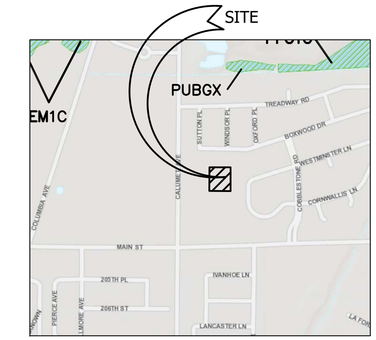
Donald C. Torrenga


Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Kiddie Academy.dwg 7/24/2019 3:53:55 PM CDT

LEGAL DESCRIPTION:

LOT 1A, RESUBDIVISION OF LOT 1, MAIN CROSSING, AN ADDITION TO THE TOWN OF MUNSTER, AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 110, PAGE 46 IN THE OFFICE OF THE RECORDER OF LAKE COUNTY, INDIANA.

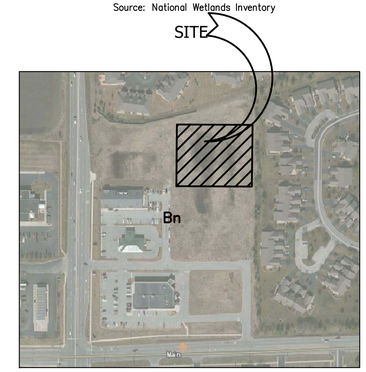



## WETLAND MAP

NOT TO SCALE
Source: National Wetlands Inventory

NORTH




## SOIL MAP

NOT TO SCALE

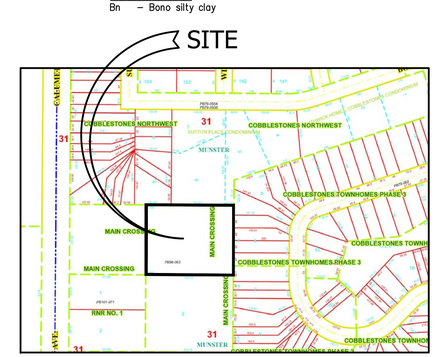
Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Soil Survey Area: Lake County, Indiana
Survey Area Data: Version 18, Sep. 10, 2015

Date aerial images were photographed: Mar 13, 2012
–Mar 28,2012

SOIL TYPE LEGEND
Bn – Bono silty clay

NORTH




## VICINITY MAP

NOT TO SCALE

NORTH

NOTES:

1. TOTAL SITE AREA = 1.583± ACRES (68,992.86± S.F.)
2. THIS PROPERTY IS LOCATED IN FLOOD ZONE "X", AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD, AS TAKEN FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR MUNSTER, LAKE COUNTY, INDIANA, MAP NUMBER 18089C0119E, EFFECTIVE DATE JANUARY 18, 2012.
3. DEVELOPER:
   DEVARSHI PATEL
   1009 CAMBRIDGE LANE
   SCHERERVILLE, INDIANA 46375
4. ALL VERTICAL DATUM IS BASED ON NAVD88.
5. HYDROLOGIC UNIT CODES: 07120003030030 – HART DITCH (PLUM CREEK)–DYER DITCH
6. LOCATION:
   LATITUDE – 41°31'28" N
   LONGITUDE – 87°30'31" W
7. CURRENT ZONING: C–1 COMMERCIAL
8. BENCHMARKS:
   #1 – SANITARY SEWER MANHOLE AT THE SOUTHEAST CORNER OF LOT 1A, RIM ELEVATION 619.69

## LEGEND:

EXISTING

- WATER MAIN SHUT OFF
- WATER HYDRANT
- MANHOLE/CATCH BASIN
- 000.00 EXISTING ELEVATION
- BARRIER CURB
- CURB & GUTTER
- BUILDING LINE
- EASEMENT LINE
- ADJACENT R.O.W./PROPERTY LINE
- BOUNDARY PROPERTY LINE
- SANITARY SEWER
- W W WATER MAIN
- STORM SEWER
- XXX CONTOUR

NORTH
GRAPHIC SCALE

30 0 15 30 60 120

( IN FEET )
1 inch = 30 ft.

DONALD C. TORRENGA
REGISTERED
No. 19868
STATE OF INDIANA
PROFESSIONAL ENGINEER


TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836–8918
website: www.torrenga.com


KIDDIE ACADEMY
10419 CALUMET AVENUE
MUNSTER, IN 46321
EXISTING TOPOGRAPHY & UTILITIES

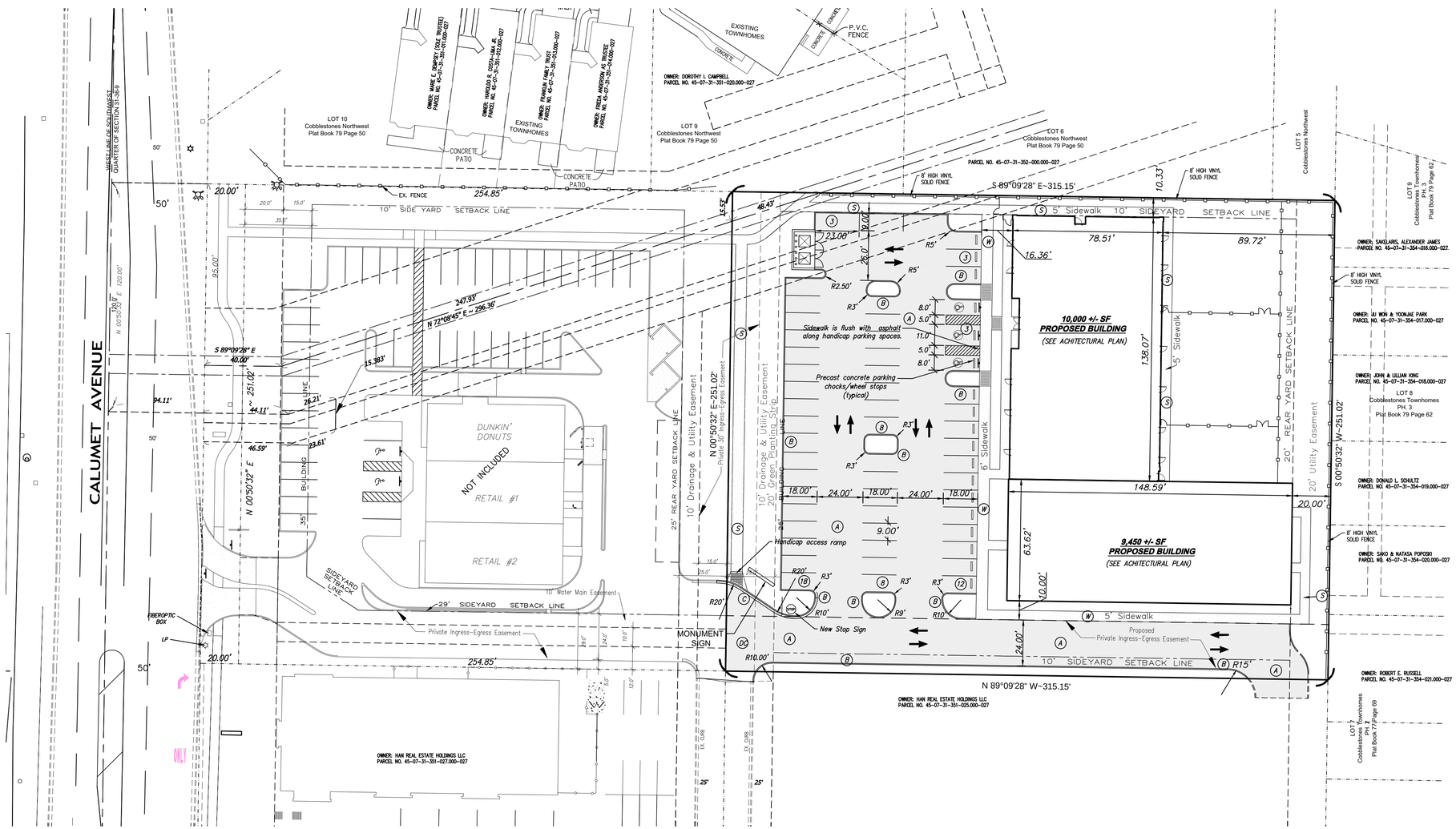
REVISIONS:
DATE: 01–26–2018

CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017–5065
SCALE: 1"=30'

SHEET
C–1.0


FILE NO:Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Kiddie Academy.dwg 7/24/2019 3:53:55 PM CDT




## LEGEND:

PROPOSED

- (#) NUMBER OF PARKING SPACES
- (A) ASPHALT PAVEMENT
- (B) BARRIER CURB
- (C) CURB & GUTTER
- (DC) DEPRESSED CURB & GUTTER
- (H) HEAVY DUTY CONCRETE
- (S) TYPICAL CONC. SIDEWALK (See Details)
- (W) CURB–WALK (See Details)
- TRAFFIC FLOW ARROWS

## PARKING

SPOTS NEEDED - 55
1/EMPLOYEE - DAY CARE (21 EMPLOYEES)
3.3 SPACES PER EACH 1000 SQ-FT BUSINESS OFFICES

TOTAL PARKING - 52 STANDARD SPACES
3 HANDICAP SPACES

## LANDSCAPING AREA COMPUTATION

| | |
|---|---|
| Pavement Area | 27,259 SF |
| Required Area | 27,259 SF x 7.5% = 2,044 SF |
| Inner Landscape Area | 3,405 SF > 50% |
| Outer Landscape Area | 7,585 SF |
| Total Landscape Area | 10,990 SF |

*PRIVATE INGRESS-EGRESS EASEMENT (TO BE RECORDED BY SEPARATE DOCUMENT)*

*Certain easements marked "PRIVATE INGRESS-EGRESS EASEMENT" are for the benefit or in favor of access for Lots in Main Crossing subdivision. The following Lots are as follows:*

*Lot 1 & Lot 2 of RNR No. 1*
*Lot 1 & Lot 2 of RNR No. 2*
*Lot 2 of Main Crossing*
*Lot 1A & Lot 2A, Resubdivision of Lot 1, Main Crossing*

NORTH
GRAPHIC SCALE
30 0 15 30 60 120
( IN FEET )
1 inch = 30 ft.

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER


TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com


# KIDDIE ACADEMY
10419 CALUMET AVENUE
MUNSTER, IN 46321
SITE PLAN

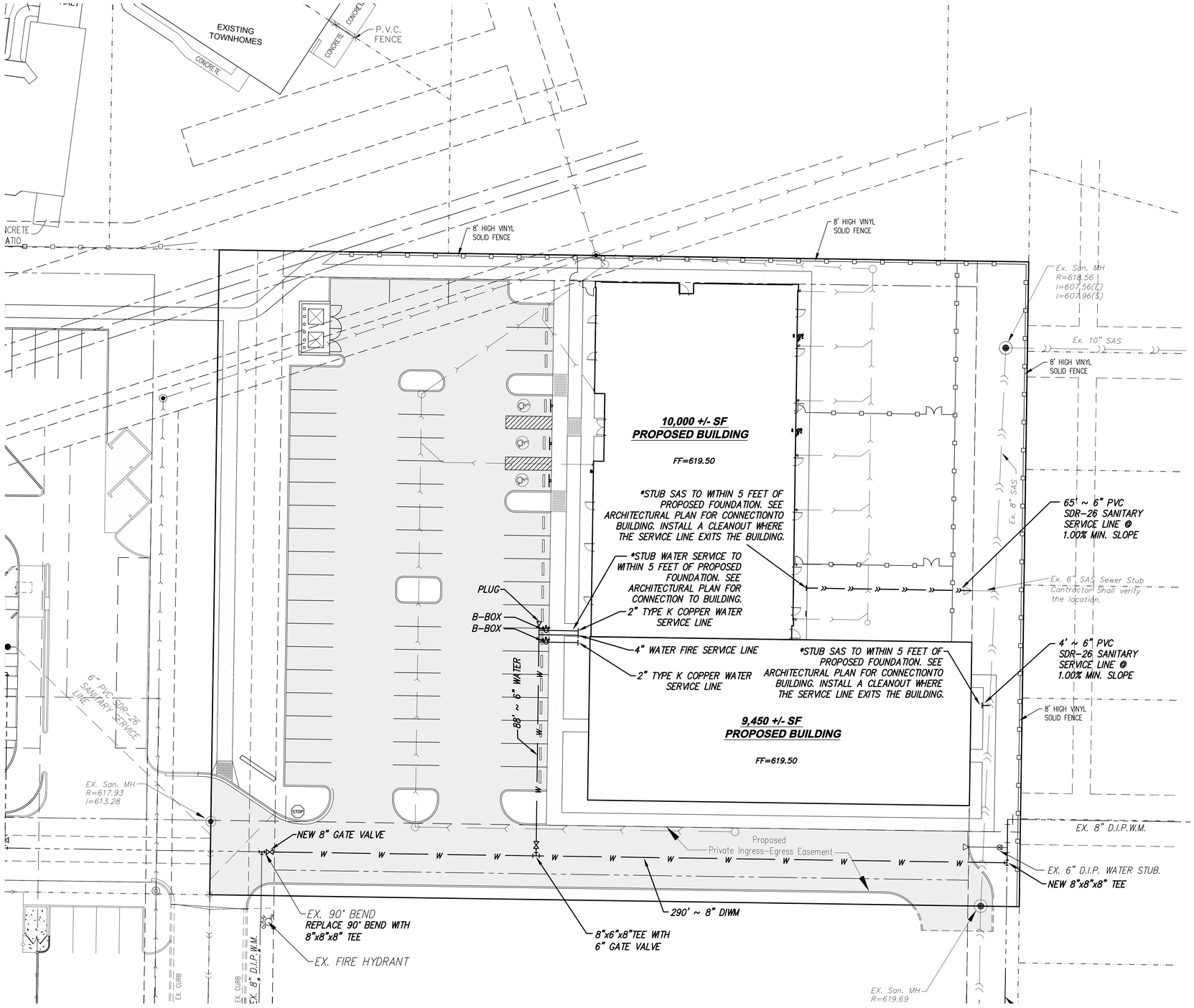
08-27-2019
08-09-2019
REVISIONS:
DATE: 07-26-2019

CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017-5065
SCALE: 1"=30'

SHEET
C-2.0

FILE NO:Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Kiddie Academy.dwg 7/24/2019 3:53:55 PM CDT




## LEGEND:

PROPOSED

- SANITARY SEWER
- WATER MAIN
- STORM SEWER

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING SITE CONDITIONS AND SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND ALL PROPOSED IMPROVEMENTS IN THE CONSTRUCTION DRAWINGS.

2. A MINUMUM 8-ft SEPARATION MUST BE MAINTAINED BETWEEN THE WATER MAIN, HYDRANTS, AND ANY SEWER MANHOLE AND/OR CATCH BASIN STRUCTURE.

NORTH

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com

KIDDIE ACADEMY
10419 CALUMET AVENUE
MUNSTER, IN 46321
SANITARY SEWER & WATER MAIN PLAN

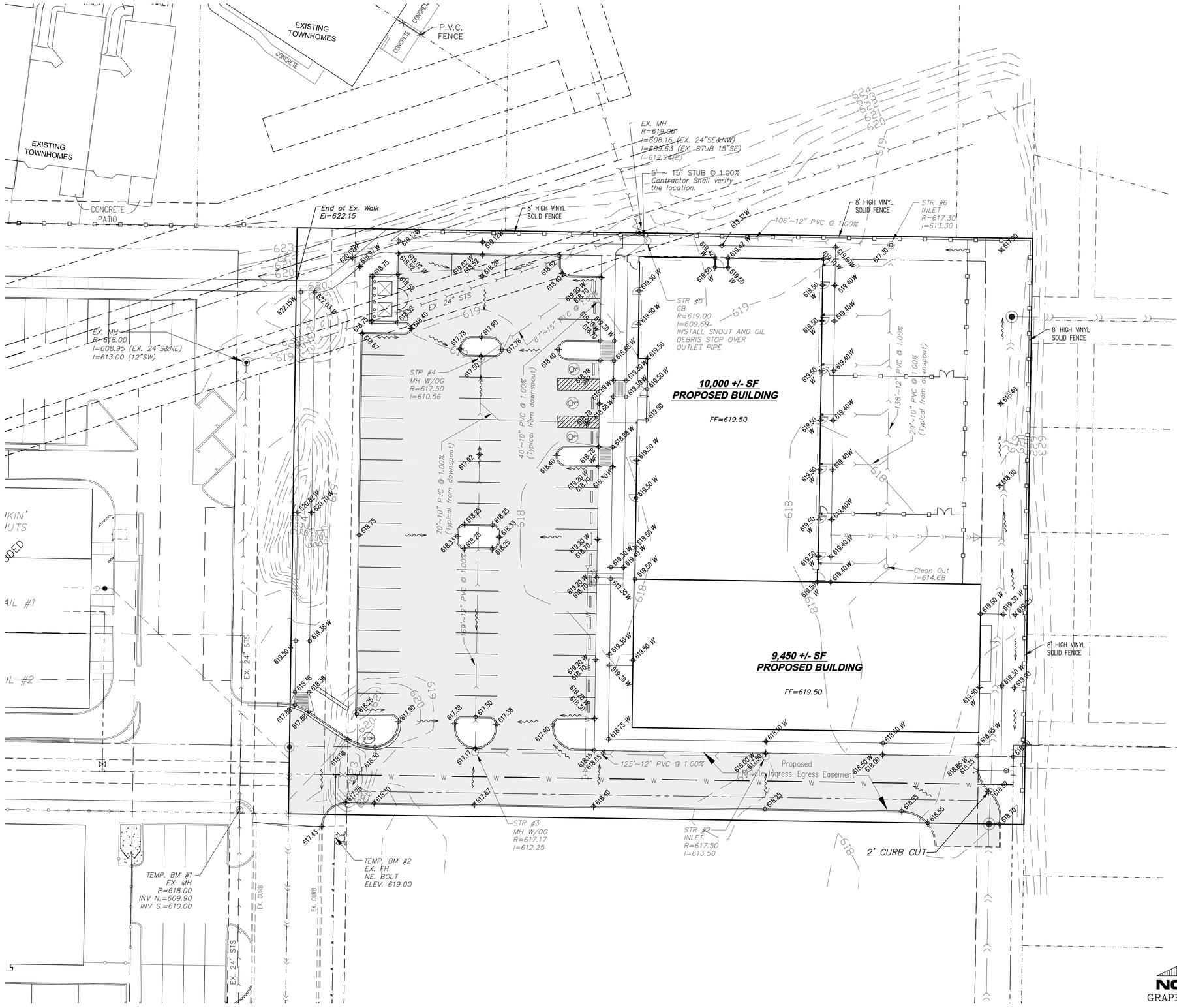
08-09-2019
REVISIONS:
DATE: 07-26-2019

CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2019-5016
SCALE: 1" = 20'

SHEET
C-3.0

FILE NO:Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Kiddie Academy.dwg 7/24/2019 3:53:55 PM CDT




## LEGEND:

PROPOSED

- XXX.XX GRADE
- DRAINAGE FLOW
- B-BOX
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- W TOP OF SIDEWALK
- WP TOP OF SIDEWALK & ASPHALT

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING SITE CONDITIONS AND SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND ALL PROPOSED IMPROVEMENTS IN THE CONSTRUCTION DRAWINGS.
2. A MINUMUM 8-ft SEPARATION MUST BE MAINTAINED BETWEEN THE WATER MAIN, HYDRANTS, AND ANY SEWER MANHOLE AND/OR CATCH BASIN STRUCTURE.
3. ALL PROPOSED ELEVATIONS REPRESENT THE ASPHALT PAVEMENT OR GROUND ELEVATION GRADE UNLESS OTHERWISE NOTED AS W FOR SIDEWALK.

NORTH
GRAPHIC SCALE
20 0 10 20 40 80
( IN FEET )
1 inch = 20 ft.

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER


TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com


# KIDDIE ACADEMY
10419 CALUMET AVENUE
MUNSTER, IN 46321
STORM SEWER & GRADING PLAN

08-09-2019
REVISIONS:
DATE: 07-26-2019

CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017-5065
SCALE: 1" = 20'

SHEET
C-3.1

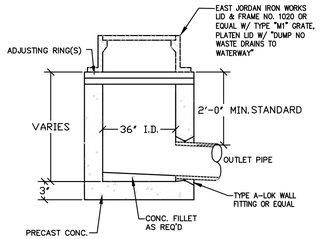
FILE NO:Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Kiddie Academy.dwg 7/24/2019 3:53:55 PM CDT

Figure 43a
INTERNATIONAL SYMBOL OF ACCESSIBILITY PROPORTIONS

NOT TO SCALE

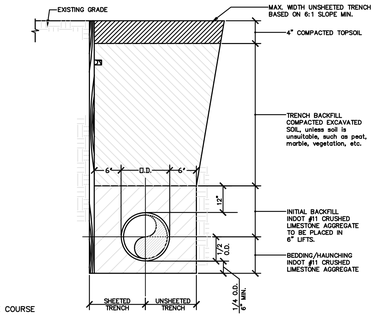
ACCESSIBILITY SIGNAGE

NOT TO SCALE



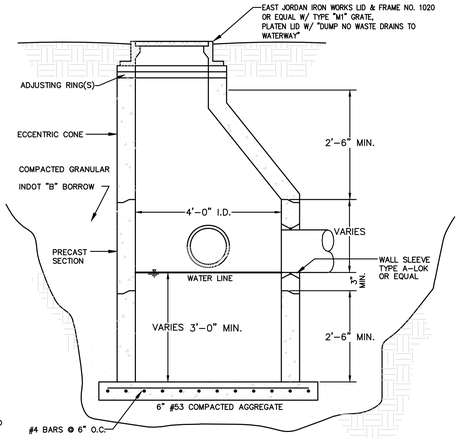

STANDARD INLET

NOT TO SCALE



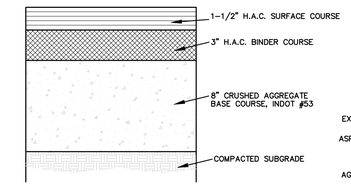

PIPE BEDDING DETAIL
FOR TRENCH IN GRASS AREAS

NOT TO SCALE




TYPE "A" CATCH BASIN

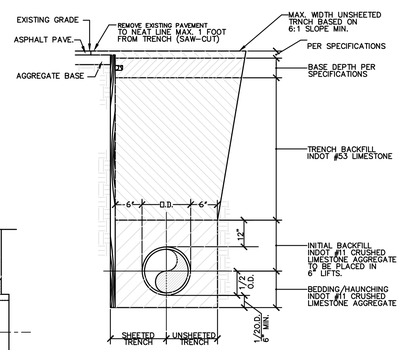
NOT TO SCALE




NOTES:
1. PAVEMENT & AGGREGATE THICKNESS MAY VARY DEPENDING ON CBR SOIL TESTING RESULTS.
2. WHERE FILL IS REQUIRED, SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD OF TESTING.

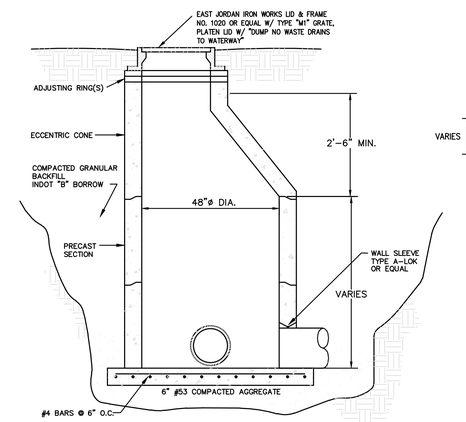
TYPICAL PAVEMENT SECTION

NOT TO SCALE



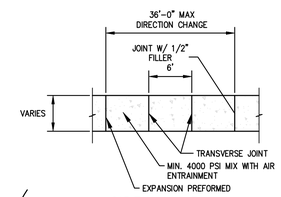

PIPE BEDDING DETAIL
FOR TRENCH IN PAVED AREAS

NOT TO SCALE

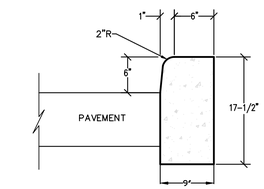



STORM TYPE "B" MANHOLE

NOT TO SCALE

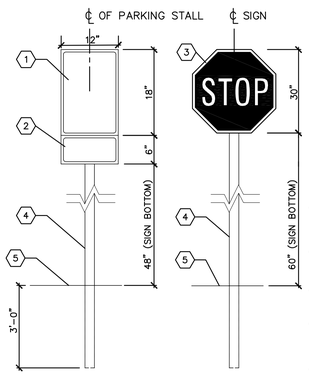



SIDEWALK PLAN




BARRIER CURB DETAIL

NOT TO SCALE

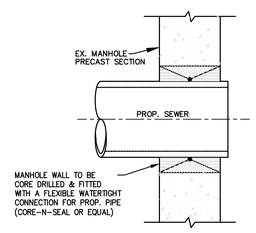



KEYED NOTES

1. STANDARD USDOT R7 SIGN (BOTH SIDES-WHERE APPLICABLE).
2. SUPPLEMENTAL SIGNS, $-FINE AS APPLICABLE.
3. STANDARD USDOT R1-1 STOP SIGN
4. 2"x2" STEEL TUBE EXTENDED INTO GROUND, 3'-0"
5. FINISH GRADE.

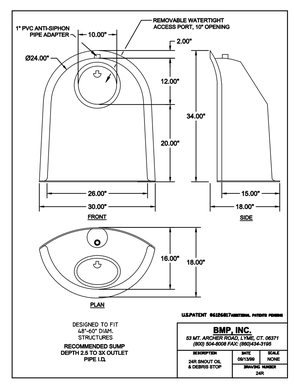
SIGN AND POST (FREE STANDING)

NOT TO SCALE



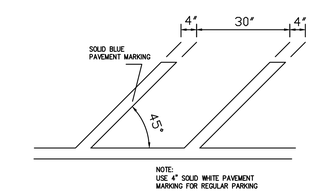

PIPE CONNECTION DETAIL
TO EXISTING MANHOLE

NOT TO SCALE




SNOUT OIL & DEBRIS STOP

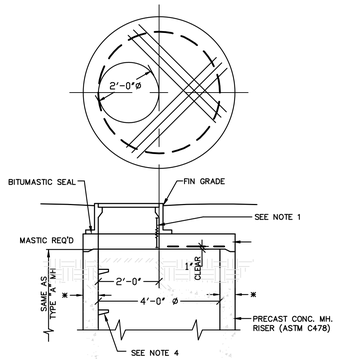
NOT TO SCALE




NOTE:
USE 4" SOLID WHITE PAVEMENT MARKING FOR REGULAR PARKING

ACCESSIBILITY AND PARKING STRIPING DETAIL

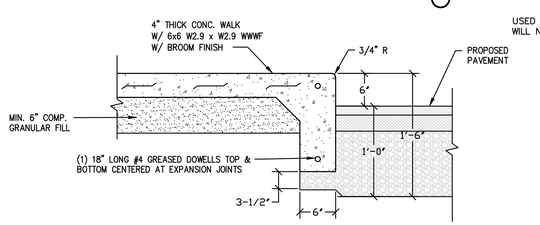
NOT TO SCALE




TYPE "C" (FLAT TOP) MANHOLE

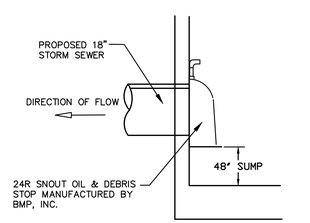
NOT TO SCALE

USED WHERE RESTRICTED HEAD ROOM WILL NOT ALLOW FOR TAPERED WALLS



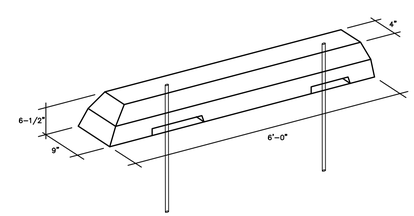

CURB-WALK SECTION

NOT TO SCALE




SNOUT CONNECTION DETAIL

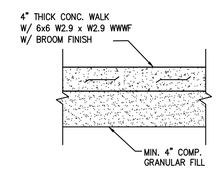
NOT TO SCALE



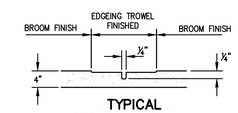

PRECAST CONCRETE PARKING CHOCKS/WHEEL STOPS

NOT TO SCALE

ALL PARKING STOPS SHALL BE PINNED TO THE ASPHALT WITH #4 REBAR ANCHORED 18" INTO THE GROUND. PARKING STOPS PLACED OVER THE PAVERS SHALL BE UNPINNED.

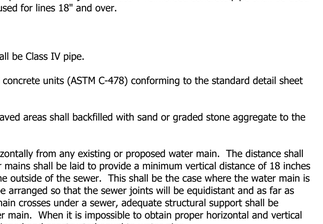



SIDEWALK SECTION



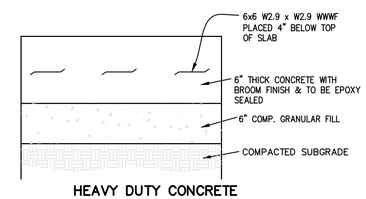

TYPICAL SIDEWALK DETAIL

NOT TO SCALE




STD. 18" ROLL-BACK CURB

NOT TO SCALE




HEAVY DUTY CONCRETE DUMPSTER PAD

SECTION VIEW
NOT TO SCALE

**SPECIFICATIONS FOR STORM SEWERS**

1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, Lake County, Indiana.

2. All storm sewer pipe, branches and fittings shall conform to either of the following: (A) Poly-vinyl chloride SDR 35 (ASTM D-3034) with push on rubber gasket joints (ASTM C-3212 for pipe 15" in diameter or under or: (B) Extra strength vitrified clay pipe (ASTM C-700) with bell and spigot push-on rubber gasket joints (ASTM C-425) or: (C) Reinforced concrete pipe (ASTM C-76) with bell and spigot or tongue and groove push on mastic joints. Class V reinforced concrete pipe shall be used for lines 15" diameter or under and Class III shall be used for lines 18" and over.

3. Gasketed joints shall be used on all storm sewers.

4. Storm sewers 18" to 27" with less than 3' cover shall be Class IV pipe.

5. All storm sewer manholes shall be standard precast concrete units (ASTM C-478) conforming to the standard detail sheet of these plans.

6. All improvements installed across paved or future paved areas shall backfilled with sand or graded stone aggregate to the subgrade.

7. All sewers shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.

8. The Contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of final acceptance.

9. All infrastructure being constructed shall be in accordance with the Town of Munster Proposed Infrastructure Specifications. Any difference between Munster's Specification and these engineering drawings shall be brought to the attention of the Engineer immediately for review.

10. Dumped Rip-Rap will be provided at all end sections, to produce a surface of approximate regularity. The finished surface shall not vary by more than 9 inches and the depth of Rip-Rap shall not be less than 12 inches nor more than 24 inches.

11. No storm sewer manhole, catch basin and inlet shall be within eight (8) feet of a water main as measured from the outside edge of the storm sewer manhole, catch basin and inlet to the outside edge of the water main.


TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com


LOT 1A, RESUBDIVISION OF LOT 1, MAIN CROSSING
MUNSTER, LAKE COUNTY, INDIANA

DETAILS AND SPECIFICATIONS

REVISIONS:
DATE: 07-26-2019

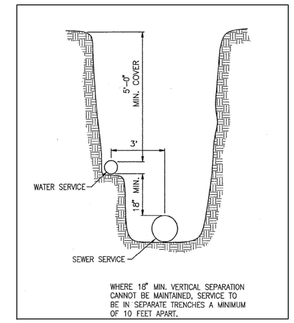
CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017-5065
SCALE: NONE

SHEET
C-4.0

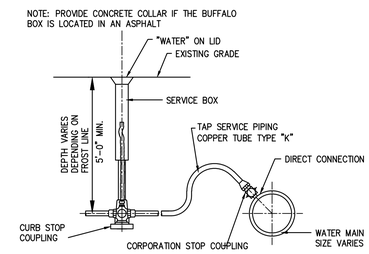
DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

FILE NO: Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Details.dwg 7/24/2019 5:05:29 PM CDT



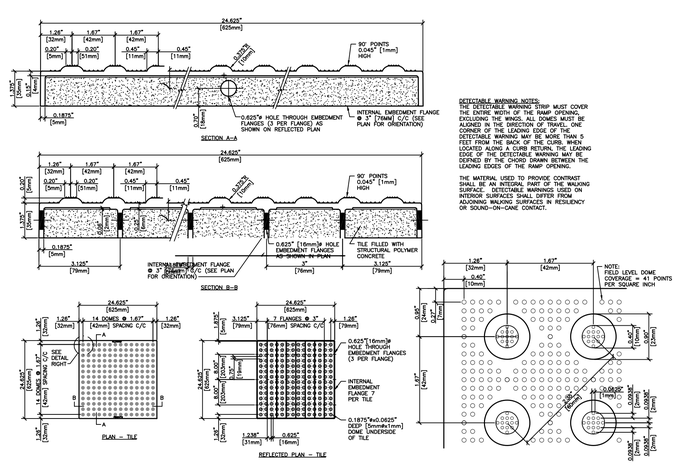

## BUILDING SERVICE CONNECTION (COMMON TRENCH SECTION)

NOT TO SCALE




## TYPICAL WATER TAP SERVICE PIPING

NOT TO SCALE

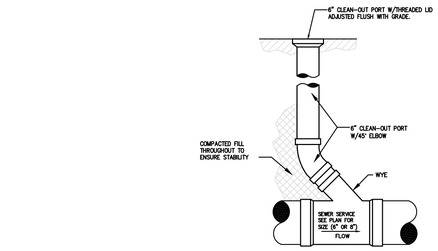



DETECTABLE WARNING NOTES:
THE DETECTABLE WARNING STRIP MUST COVER THE ENTIRE WIDTH OF THE RAMP OPENING, EXCLUDING THE WINGS. ALL DOMES MUST BE ALIGNED IN THE DIRECTION OF TRAVEL. ONE CORNER OF THE LEADING EDGE MUST BE LOCATED NO MORE THAN 5 FEET FROM THE BACK OF THE CURB. WHEN LOCATED ALONG A CURB RETURN, THE LEADING EDGE OF THE DETECTABLE WARNING MAY BE DEFINED BY THE CHORD DRAWN BETWEEN THE LEADING EDGES OF THE RAMP OPENING.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.

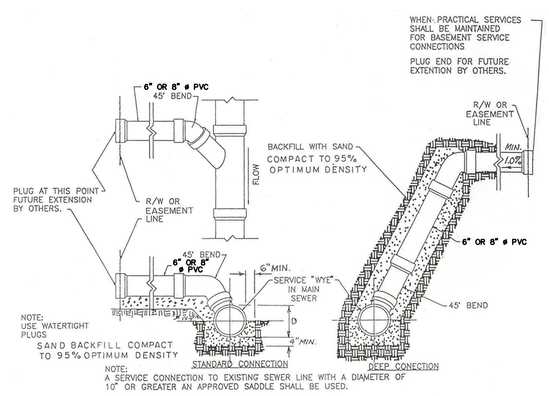
## TRUNCATED DOME TACTILE – WARNING STRIP

NOT TO SCALE




## CLEAN-OUT

NOT TO SCALE




## SERVICE CONNECTION DETAILS

NOT TO SCALE

GENERAL SPECIFICATIONS FOR WATER MAINS

1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, and the State of Indiana.

2. All water main pipe shall be (A) Ductile Iron Pipe (ANSI A 21.51/AWWA C 151, Class 52) with bell and spigot push-on rubber gasket joints (AWWA CIII). All water main shall be wrapped with Polyethylene Bags. All water main pipe shall be installed with a minimum cover of 5.0 feet from the top of the curb to the top of the pipe. All fire hydrants, tees, bends, fittings, and necessary restrained joints lengths shall be suitable harnessed with Meg-a-Lug field lock gaskets, or equal. All bolts and nuts on water main structures shall be stainless steel. Pressure test at 150 psi for 2 hours. Other materials may be used only with the express written permission of the Town of Munster.

3. All water mains shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed sewer. The distance shall be measured from outside of pipe to outside of pipe. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.

4. Care should be taken in parkway areas to assure compaction acceptable for the future stability of driveways and sidewalks. While special backfill material is not required, it shall be the responsibility of the Contractor to protect against substantial future settlement of backfilled areas. The Contractor shall provide special backfill material across driveways and sidewalks in the event that a water main is installed underneath.

5. The Buffalo Boxes shall be arch pattern box style and shall be located in parkways, if possible. No Buffalo Boxes shall be located in concrete areas, and they shall have AWWA approved shut offs and corporation valves.

6. All water main pipe shall be disinfected by the use of liquid chlorine. The Contractor shall notify the town of Munster when the water main system (or portion thereof) is ready for testing.

7. The Contractor is responsible for water quality tests done by a State Certified Laboratory. The Town of Munster Water Department staff shall be notified and be present while tests are being performed. The approved water system shall be turned on by the Water Department Staff, only after the water quality reports have been approved.

8. The newly installed water main (or portions thereof) shall be subjected to a pressure and leakage test, using hydrostatic testing. Test pressure shall not be less than 1.5 times the working pressure or exceed pipe design pressure. Pressure shall not vary by more than ± 5 PSI for a minimum of a 2 hour duration test. The exposed pipe and joints shall be examined carefully during the test and any damaged or defective pipe or joints shall be replaced, and the test shall be repeated. The allowable leakage shall not exceed 11.65 gpd/mi/in of nominal pipe diameter at a pressure of 150 PSI.
All visible leaks are to be repaired regardless of the amount of leakage. The contractor shall be responsible for supplying all testing materials and appurtenances. The Town of Munster shall be notified when the water main (or portion thereof) is ready for testing.

9. The contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" Plans and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of the final acceptance.

10. All watermain shall be polywrapped.

11. Fire protection service lines and domestic use service lines shall be tapped separately from the water main to allow for shutdown of the domestic service only for non-payment.

GENERAL SPECIFICATIONS FOR SANITARY SEWER

1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, Lake County, and the State of Indiana.

2. All sanitary sewer pipe, branches and fittings shall conform to one of the following: (a) Extra strength vitrified clay pipe (ASTM C-700) with push on rubber gasket joints (ASTM C-425). (b) Poly-vinyl chloride (PVC), SDR 26 (ASTM D-3034), with push-on rubber gasket joints (ASTM C-3212). Six inch service pipes shall be in accordance with the infrastructure improvement codes of the Town of Munster.

3. All improvements installed across paved or future paved areas shall be backfilled with sand or graded stone aggregate to the subgrade.

4. The competed sanitary sewer system shall be air tested for infiltration and shall have a maximum infiltration of 100 GPD/inch/diameter/mile of sewer pipe. The completed sanitary sewer system shall be air pressure tested for infiltration/exfiltration with 4 lbs. of pressure for 4 minutes. The testing shall conform to the procedure described in ASTM C-838-86 for clay pipe, ASTM C 924 for concrete pipe, ASTM F-1417 for poly-vinyl chloride pipe, and for other materials test procedures approved by the regulatory agency. The Contractor shall be responsible for supplying all testing materials and appurtenances. The Town of Munster shall be notified when the system (or portion thereof) is ready for testing.

5. Deflection tests shall be performed on all flexible pipe materials placed. The contractor shall be responsible for supplying testing materials and appurtenances. The tests shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5%. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices. The Town of Munster shall be notified when the system (or portion thereof) is ready for testing.

6. Care should be taken in parkway areas to assure compaction acceptable for the future stability of driveways and sidewalks. While special backfill material is not required, it shall be the responsibility of the Contractor to protect against substantial future settlement of backfilled areas. The contractor shall provide special backfill material across driveways and sidewalks in the event that a sewer or main is installed underneath.

7. All sewers shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.

8. The Contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" Plans and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of the final acceptance.

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER


TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com


LOT 1A, RESUBDIVISION OF LOT 1, MAIN CROSSING
MUNSTER, LAKE COUNTY, INDIANA

# DETAILS AND SPECIFICATIONS

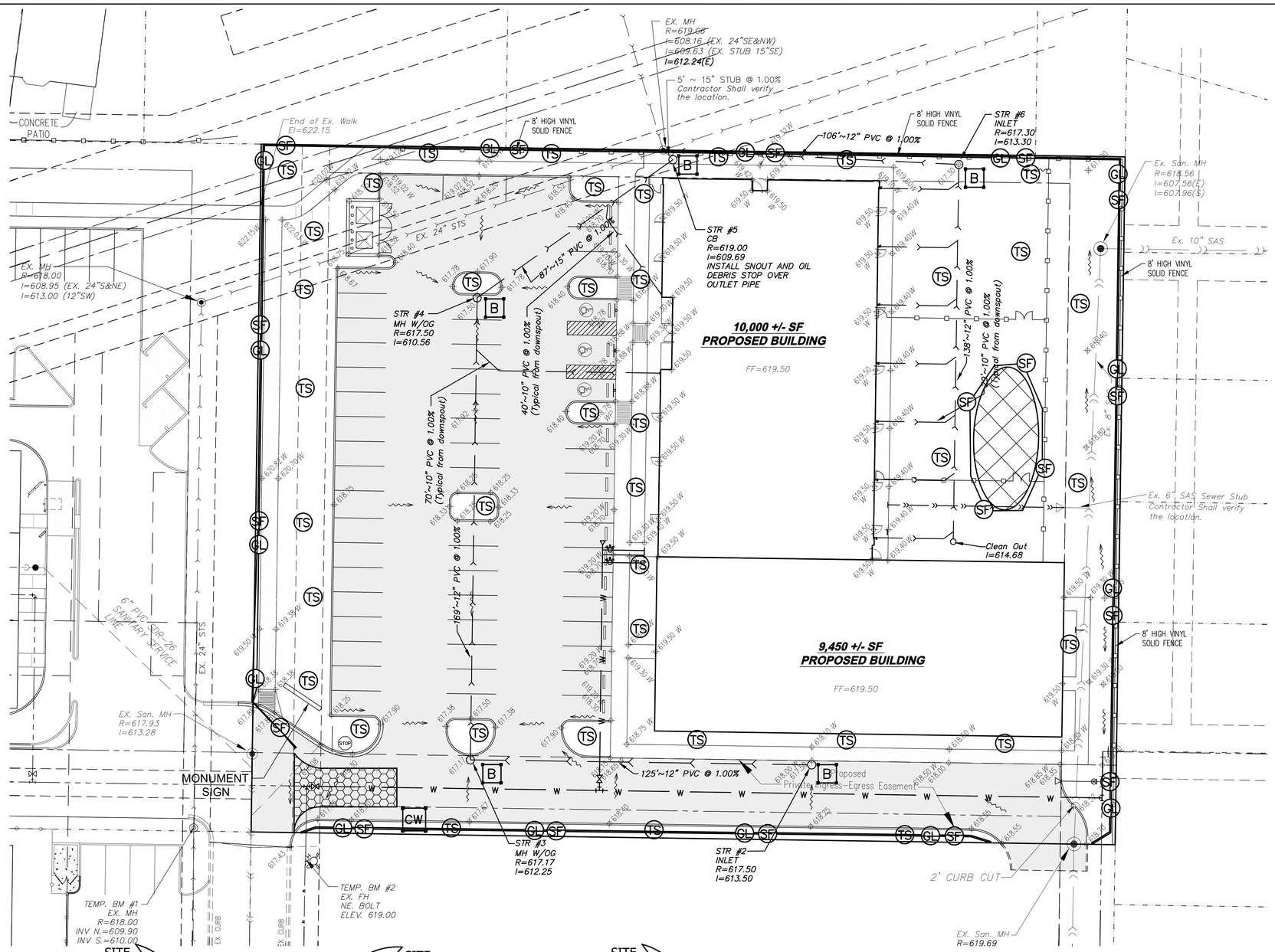
REVISIONS:
DATE: 07-26-2019

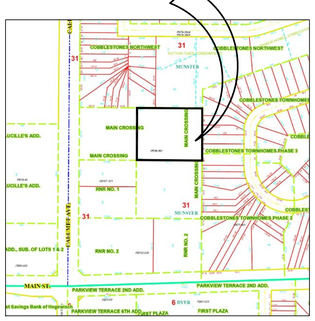
CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017-5065
SCALE: NONE

SHEET
C-4.1

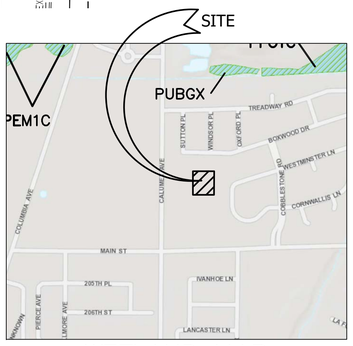
FILE NO: Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Details.dwg 7/24/2019 5:05:29 PM CDT




VICINITY MAP

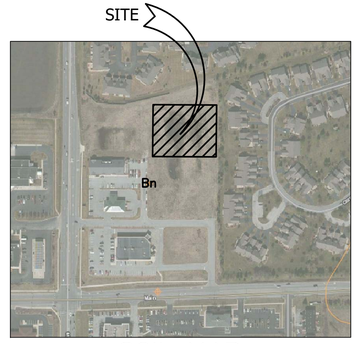
NOT TO SCALE




WETLAND MAP

NOT TO SCALE

Source: National Wetlands Inventory




SOIL MAP

NOT TO SCALE

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Soil Survey Area: Lake County, Indiana
Survey Area Data: Version 18, Sep. 10, 2015

Date aerial images were photographed: Mar 13, 2012 –Mar 28,2012

SOIL TYPE LEGEND
Bn – Bono silty clay

**Physical and Chemical Properties of Soils**

| Soil series and map symbols [1] | Depth to seasonal high water table | Depth from surface | Classification: Dominant USDA texture | Classification: Unified | Classification: AASHO | Permeability | Available moisture capacity | Reaction | Frost-heave potential | Shrink swell potential |
|---|---|---|---|---|---|---|---|---|---|---|
| Bono: Bn _____ | 0-1 | 0 - 21 | Silty Clay | OL,MI or CI | A-7 | 0.20 - 0.63 | .20 | 6.1 - 6.5 | High | High |
| | | 21 - 9 | Silty Clay | CH | A-7 | <0.06 | .18 | 5.6 - 6.0 | Moderate | High |
| | | 39 - 60 | Silty Clay | CL | A-7 | <0.06 | .18 | 7.1 - 7.8 | Moderate | High |

**GENERAL NOTES:**

1. THIS PROPERTY IS LOCATED IN FLOOD ZONE "X" (SHADED) AREA OF 0.2% ANNUAL CHANCE FLOOD; AREA OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH OF LESS THAN 1 FOOT OR WITH DRAINAGE AREA LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE MUNSTER, LAKE COUNTY, INDIANA, MAP NUMBER 18089C0119E, EFFECTIVE DATE JAN. 18, 2012. NO FLOODWAYS OR FLOODPLAINS FRINGES EXIST ON THIS PROPERTY.

2. HYDROLOGIC UNIT CODES: 07120003030030 HART DITCH (PLUM CREEK) - DYER DITCH.

3. STATE OR FEDERAL WATER QUALITY PERMITS ARE REQUIRED FOR THE PROJECT, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) IDEM RULE 5 WATER QUALITY PERMIT IS REQUIRED.

4. THE SITE CONSISTS PRIMARILY OF OPEN AREA COVERED BY SEVERAL VARIETIES OF UPLAND GRASSES.

5. THERE IS PRESENCE OF HYDRIC SOILS ON THIS PROPERTY BONO SILTY CLAY(Bn).

6. THERE ARE NO EXISTING WETLAND AREAS ON THIS PROPERTY, AND ITS SURROUNDING AREAS AS CLASSIFIED BY THE U.S. FISH AND WILDLIFE SERVICE, NATIONAL WETLANDS INVENTORY, AND THE UNITED STATES DEPARTMENT OF THE INTERIOR. THERE ARE NO LAKES, PONDS OR WATER COURSES ON THE PROJECT SITE OR ON ADJACENT PROPERTY. HART DITCH (PLUM CREEK) IS THE WATER COURSE WHICH THE STORMWATER FROM THE PROPOSED SITE WILL ULTIMATELY DISCHARGE INTO, ITS LOCATED APPROXIMATELY ½ MILE EAST OF THE PROJECT SITE, AND IS CLASSIFIED AS A WATER OF THE U.S., WITH A NWL = 608±.

7. POTENTIAL SOURCE OF STORM WATER DISCHARGE ENTERING THE GROUNDWATER FROM THIS DEVELOPMENT WILL BE THROUGH NATURAL GROUND ABSORPTION ONLY. THERE ARE NO ABANDONED WELLS OR SINKHOLES ON THE PROPERTY.

8. THERE ARE NO SENSITIVE AREAS ASSOCIATED WITH THIS PROPERTY, AND ITS SURROUNDING AREAS.

9. THERE ARE NO REGULATED DRAINS WITHIN THIS PROPERTY, OR ON ADJACENT PROPERTIES. THERE IS NO RECORD OR KNOWLEDGE OF EXISTING FARM DRAINS OR FIELD TILE, INLETS AND OUTFALLS LOCATED WITHIN THE EXISTING PROPERTY LIMITS.

10. SOIL STOCKPILES, BORROW AND DISPOSAL AREAS ARE LOCATED WITHIN THE PROJECT SITE. SOIL STOCKPILES SHALL BE SURROUNDED WITH SILT FENCING AT ALL TIMES TO PREVENT EXCESSIVE EROSION, AND IF LEFT UNDISTURBED FOR A PERIOD OF MORE THAN 14 DAYS, IT SHALL BE TEMPORARY SEEDED.

11. AREA WHERE THE PROPOSED BUILDINGS, PARKING LOTS, AND DRIVES AS WELL AS AREAS WHERE PROPOSED UTILITIES ARE LOCATED WILL BE DISTURBED DURING CONSTRUCTION. IN ALL OTHER AREAS, EXISTING VEGETATIVE COVER WILL BE PRESERVED.

12. FUEL STORAGE AREA IF REQUIRED SHALL BE WITHIN THE CONSTRUCTION STAGING AREA, FUEL SHALL BE STORED IN APPROVED MOBILE REFUELING TANK LOCATED AWAY FROM DRAINAGE STRUCTURES AND CHANNELS. FIRE EXTINGUISHERS SHALL BE LOCATED NEAR FUEL STORAGE AREA AND BE OF SUITABLE TYPE, POSTED, AND BE MAINTAINED IN GOOD CONDITION.

13. TEMPORARY SEED ALL AREAS OF BARE SOIL (WITH THE ADDITION OF A BLANKET WHERE SLOPES ARE GRATER THAN 3:1) THAT WILL REMAIN UNDISTURBED FOR A PERIOD OF MORE THAN 14 DAYS. SEEDING: OPTIMUM SEEDING DATED ARE MARCH 1 - MAY 10 AND AUGUST 10 - SEPTEMBER 30. SEEDING DATES BETWEEN MAY 10 AND AUGUST 10, MAY NEED TO BE IRRIGATED. FOR SEEDING RECOMMENDATIONS SEE PRACTICE 3.12, INDIANA STORM WATER QUALITY MANUAL.

14. ALL SOIL STOCKPILES, AREAS THAT ARE DISTURBED DURING CONSTRUCTION, AND DRAINAGE SWALES WHICH ARE SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FOURTEEN (14) CALENDAR DAYS OR MORE MUST BE TEMPORARILY OR PERMANENTLY SEEDED WITH MEASURES APPROPRIATE FOR THE SEASON.

15. LOCATION OF ON-SITE POSTING, OF THE COMPLETE RULE 5 NOI AND NOS LETTERS, SHALL BE AVAILABLE AT THE ENTRANCE TO THE SITE AND VISIBLE TO THE PUBLIC.

16. SITE ELEVATIONS ARE BASED ON NAVD 88, AND HORIZONTAL DATUM IS BASED ON INDIANA STATE PLANE COORDINATES NAD 83.

Temporary stabilization plans and sequence of implementation.

*a. On site posting of the complete Rule 5 NOI and NOS Letters. Location of the posting and plans shall be made available by the owner contractor.*
*b. Installation of all erosion/sedimentation controls including stabilized construction entrance, silt fences, etc.., per the engineering plans.*
*c. Clearing and grubbing.*
*d. Topsoil stockpile surrounded with silt fencing.*
*e. Rough cut and fill of all proposed parking lot, Building pad, and other major grading per the engineering plans shall be done to rough grades at start of construction to prevent excessive soil erosion due to construction.*
*f. Construction of storm sewers, sanitary sewers, water mains, and other utility, and implementation of storm sewer inlet protection at each open-grate structure (fabric drop inlet protection, basket inlet protection, etc., as per engineering plans).*
*g. Regrade and construct parking lot, building pad, and sidewalks.*
*h. Finish grading of all disturbed areas with permanent seeded, mulched, and landscaping, when no additional disturbance is anticipated.*
*i. Complete permanent erosion control and restoration of site vegetation. Erosion control measures are to be removed upon permanent vegetative cover being established.*

**RESPONSIBLE INDIVIDUAL FOR SWPPP**

| | |
|---|---|
| **NAME:** | **Sam Baker** |
| **COMPANY:** | **Baker & Associates, Architects** |
| **ADDRESS:** | **673 High Street** |
| | **Worthington, OH 43085** |
| **PHONE NO.:** | **(614) 436-0555** |

**SWPPP LEGEND:**

- TEMPORARY ENTRANCE/EXIT (GRAVEL OR MAT)
- SOIL STOCK PILE
- BASKET INLET/CATCH BASIN PROTECTION
- GRADE LIMITS
- SILT FENCE (SEDIMENT FENCE)
- CONCRETE WASH OUT AREA
- TEMPORARY SEEDING
- POSTING (RULE 5 NOI & NOS LETTER AND LOCAL SWPPP PERMIT)
- GRADES (PROPOSED)

NORTH

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com

KIDDIE ACADEMY
10419 CALUMET AVENUE, MUNSTER, IN 46321
CONSTRUCTION
STORM WATER POLLUTION PREVENTION PLAN

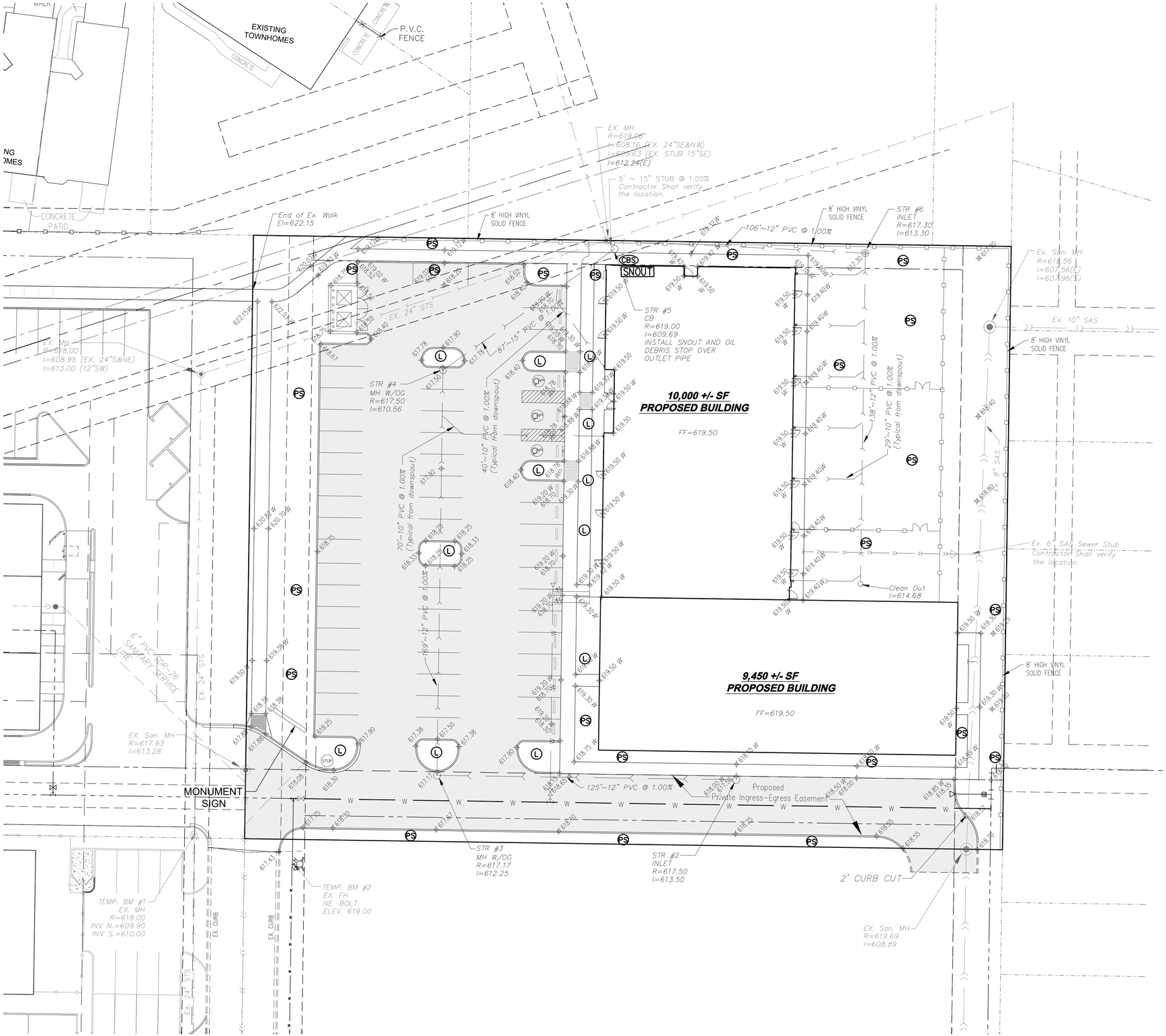
08-09-2019
REVISIONS:
DATE: 07-26-2019

CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017-5065
SCALE: 1" = 20'

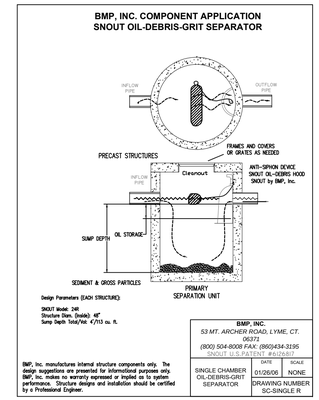
SHEET
C-5.0

FILE NO: Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Kiddie Academy.dwg 7/24/2019 3:53:55 PM CDT




LEGAL DESCRIPTION:

LOT 1A, RESUBDIVISION OF LOT 1, MAIN CROSSING, AN ADDITION TO THE TOWN OF MUNSTER, AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 110, PAGE 46 IN THE OFFICE OF THE RECORDER OF LAKE COUNTY, INDIANA.




**DESCRIPTION OF POST CONSTRUCTION BMP'S THAT WILL BE INSTALLED**

| | |
|---|---|
| - Permanent Seeding and Landscaping (Vegetative Filter Strip) | =48%TSS |
| - Storm Sewer Basins with Sumps | NA |
| - Snout Oil and Debris Hood | =45% TSS |
| - Offsite Existing Dry Detention Area | =72% TSS |

Note: This site has met the required 80 %TSS removal

## SWPPP LEGEND:

- (CBS) – CATCH BASIN SUMP
- (PS) – PERMANENT SEEDING
- + XXX.XX – GRADES
- SNOUT – OIL AND DEBRIS HOOD (SEE DETAIL)
- (L) – LANDSCAPING

*NOTES:*
*1. SEE LANDSCAPING PLAN FOR PLANTINGS AND GROUND COVER.*

**RESPONSIBLE INDIVIDUAL FOR SWPPP**

| | |
|---|---|
| **NAME:** | **Sam Baker** |
| **COMPANY:** | **Baker & Associates, Architects** |
| **ADDRESS:** | **673 High Street Worthington, OH 43085** |
| **PHONE NO.:** | **(614) 436-0555** |

NORTH
GRAPHIC SCALE
20 0 10 20 40 80
( IN FEET )
1 inch = 20 ft.

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER


TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com


KIDDIE ACADEMY
10419 CALUMET AVENUE, MUNSTER, IN 46321
POST CONSTRUCTION
STORM WATER POLLUTION PREVENTION PLAN

08-09-2019 REVISIONS:
DATE: 07-26-2019

CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017-5065
SCALE: 1" = 20'

SHEET
C-5.1

FILE NO: Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 Kiddie Academy.dwg 7/24/2019 3:53:55 PM CDT

## TEMPORARY CONSTRUCTION ENTRANCE/EXIT

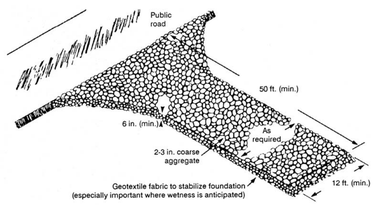
**Purpose:** To provide a stable entrance/exit condition from the construction site, and to keep mud and sediment off public roads.

**"GRAVEL"**

**Requirements:**
Width: 12 feet minimum or full width of entrance
Length: 50 feet minimum
Material: 2-3 inch diameter washed stone (INDOT CA No. 2), with Geotextile Fabric Underliner.
Thickness: 6 inch minimum

**Installation:**
1. Remove all vegetation and other objectionable material from the foundation area.
2. Install pipe under the stone if needed to provide proper public road drainage.
3. Install Geotextile fabric on the graded foundation area prior to stone placement.
4. Divert all surface runoff and drainage from the stone to sediment trap.

**Maintenance:**
1. Inspect entrance pad for sediment deposits weekly and after storm events or heavy use.
2. Reshape pad as needed for drainage and runoff control.
3. Topdress with clean stone as needed.
4. Remove mud and sediment tracked or washed onto public road by brushing or sweeping. No flushing of sediment off the street
5. Repair any broken road pavement immediately.



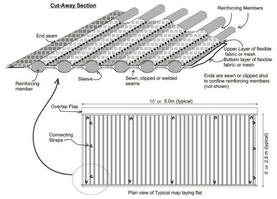

Plans of a temporary gravel construction entrance/exit pad.

**"MAT"**

**Requirements:**
Width: 12 feet minimum or full width of entrance
Length: 50 feet minimum
Material: Geotextile-Type mats, **AGES Mud Mat** or approved equal

**Installation:**
1. Install pipe under mat if needed to provide proper site drainage.
2. Install Geotextile-Type mat on the graded foundation area.
3. Divert all surface runoff and drainage from the mat to sediment trap.

**Maintenance:**
1. Inspect entrance mat for sediment deposits weekly and after storm of a minimum of 1/2 inch rainfall events or heavy use.
2. Reshape pad as needed for drainage and runoff control.
3. Repair or replace mats as needed.
4. Remove mud and sediment tracked or washed onto public road by brushing or sweeping. No flushing of sediment off the street.




PLANS OF TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD

## TEMPORARY SEEDING

**Purpose:** To stabilize disturbed areas especially along both sides of the streets and courts after final grading work is completed and where additional work is not scheduled.

**Requirements:**
Site and seedbed preparation: Graded, and lime and fertilizer applied

**Seed Selected:**
Selected on the basis of quick germination, growth, and time of year, see Table for temporary seeding recommendations.

**Fertilize:** According to soil test or use 600 lbs/acre 12-12-12 analysis or equivalent.

**Mulch:** 1.5 - 2 tons/acre straw. Straw must be dry, unchopped and free of undesirable seeds.

**Application:**
1. Fertilize and lime as recommended by the soil test.
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2-4" deep with a disk or rake operated across the slope.
3. Apply seed uniformly with a drill or cultipacker-seeder, or by broadcasting, and cover to a depth as shown on Table for temporary seeding recommendations.
4. If drilling or broadcasting, firm the seedbed with a roller or cultipacker.
5. Mulch all seeded areas. (Note: If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.)

**Maintenance:**
1. Inspect periodically after planting to see that vegetative stands are adequately established; re-seed if necessary.
2. Check for erosion damage after storm events and repair; re-seed and mulch if necessary.

**Notes:**
1. Vegetative Filter Strip: permanent or temporary, shall be done on all disturbed areas along both sides of the streets and courts to reduce erosion where additional work is not scheduled.
2. Permanent Seeding: or sodding shall be done at the time of final landscaping.

**Exhibit 3.11-B. Temporary Seeding Recommendations.**

| Seed species* | Rate/acre | Planting depth | Optimum dates** |
|---|---|---|---|
| Wheat or rye | 150 lbs. | 1 to 1½ in. | 9/15 to 10/30 |
| Spring oats | 100 lbs. | 1 in. | 3/1 to 4/15 |
| Annual ryegrass | 40 lbs. | 1/4 in. | 3/1 to 5/1<br>8/1 to 9/1 |
| German millet | 40 lbs. | 1 to 2 in. | 5/1 to 6/1 |
| Sudangrass | 35 lbs. | 1 to 2 in. | 5/1 to 7/30 |

* Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than a year.
** Seeding done outside the optimum dates increases the chances of seeding failure.

## PERMANENT SEEDING

**Purpose:** To stabilize disturbed areas especially along both sided of the streets and courts after final grading work is completed and where additional work is not scheduled.

**Requirements:**
Site and seedbed preparation: Graded, and lime and fertilizer applied.

**Seed Selected:**
Selected on the basis of Site Conditions, Soil PH, intended land use, and expected level of maintenance see Table for permanent seeding recommendations.

**Fertilize:** According to soil test or use 600 lbs/acre 12-12-12 analysis or equivalent.

**Mulch:** 1.5 - 2 tons/acre straw. Straw must be dry, unchopped and free of undesirable seeds.

**Application:**
1. Fertilize and line as recommended by soil test.
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2–4" deep with a disk or rake operated across the slope.
3. Apply seed uniformly with a drill or cultipacker-seeder, or broadcasting, and cover to a depth of ¼ to ½ inch.
4. If drilling or broadcasting, firm the seedbed with a roller or cultipacker.
5. Mulch all seeded areas. (Note: If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.)

**Maintenance:**
1. Inspect periodically, especially after storm events, until the stand is successfully established. (Characteristics of a successful stand include: vigorous dark green or bluish-green seedling; uniform density with nurse plants, legumes, and grasses well intermixed; green leaves; and the perennials remaining green throughout the summer, at least at the plant base.)
2. Plan to add fertilizer the following seasons according to soil test recommendations.
3. Repair damaged, bare or sparse areas by filling any gullies, refertilizing, over- or re-seeding, and mulching.
4. If plant cover is sparse or patchy, review the plant materials chosen, soil fertility, moisture condition, and mulching; then repair the affected area either by over-seeding or by re-seeding, and mulching.
5. If vegetation fails to grow, consider soil testing to determine acidity or nutrient deficiency problems. (Contact your SWCD or Cooperative Extension office for assistance.)
6. If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.

**Notes:**
1. Permanent seeding optimum dates are March 1 to May 10 and August 10 to September 30, seeding done between May 10 to August 10 may require irrigation. Temporary seeding may be used as an alternative until preferred date for Permanent Seeding.
2. Retention/Detention area walls and base will be seeded as soon as possible using permanent seeding when possible, mulch or erosion control blankets are to be used on seeded areas to protect the soil from wind and water impact. Install silt fences around Retention/Detention area until seed is established.

**Seeding Recommendations.**
This table provides several seeding options. Additional seed species and mixtures are available commercially. When selecting a mixture, consider site conditions, including soil properties (e.g., soil pH and drainage), slope aspect and the tolerance of each species to shade and droughtiness.

| Seed species and mixtures | Rate per acre Permanent | Rate per acre Dormont or frost | Optimum soil pH |
|---|---|---|---|
| OPEN AND DISTURBED AREAS (REMAINING IDLE MORE THAN 1 YR.) | | | |
| 1. Perennial ryegrass | 35 to 50 lbs. | 50 to 75 lbs. | 5.6 to 7.0 |
| + white or ladino clover* | 1 to 2 lbs. | 1 ½ to 3 lbs. | |
| 2. Kentucky bluegrass | 20 lbs. | 30 lbs. | 5.5 to 7.5 |
| + smooth bromegrass | 10 lbs. | 15 lbs. | |
| + switchgrass | 3 lbs. | 5 lbs. | |
| + timothy | 4 lbs. | 6 lbs. | |
| + perennial ryegrass | 10 lbs. | 15 lbs. | |
| + white or ladino clover* | 1 to 2 lbs. | 1 ½ to 3 lbs. | |
| 3. Perennial ryegrass | 15 to 30 lbs. | 22 to 45 lbs. | 5.6 to 7.0 |
| + tall fescue** | 15 to 30 lbs. | 22 to 45 lbs. | |
| 4. Tall fescue** | 35 to 50 lbs. | 50 to 75 lbs. | 5.5 to 7.5 |
| + ladino or white clover* | 1 to 2 lbs. | 1 ½ to 3 lbs. | |
| STEEP BANKS AND CUTS, LOW MAINTENANCE AREAS (NOT MOWED) | | | |
| 1. Smooth bromegrass | 25 to 35 lbs. | 35 to 50 lbs. | 5.5 to 7.5 |
| + red clover* | 10 to 20 lbs. | 15 to 30 lbs. | |
| 2. Tall fescue** | 35 to 50 lbs. | 50 to 75 lbs. | 5.5 to 7.5 |
| + white or ladino clover* | 1 to 2 lbs. | 1 ½ to 3 lbs. | |
| 3. Tall fescue** | 35 to 50 lbs. | 50 to 75 lbs. | 5.5 to 7.5 |
| + red clover* | 10 to 20 lbs. | 15 to 30 lbs. | |
| (Recommended north of US 40) | | | |
| 4. Orchardgrass | ^^ to 30 lbs. | 30 to 45 lbs. | 5.6 to 7.0 |
| + red clover* | 10 to 20 lbs. | 15 to 30 lbs. | |
| + ladino clover* | 1 to 2 lbs. | 1 ½ to 3 lbs. | |
| 5. Crownvetch* | 10 to 12 lbs. | 15 to 18 lbs. | 5.6 to 7.0 |
| + tall fescue** | 20 to 30 lbs. | 30 to 45 lbs. | |
| (Recommended south of US 40) | | | |
| LAWNS AND HIGH MAINTENANCE AREAS | | | |
| 1. Bluegrass | 105 to 140 lbs. | 160 to 210 lbs. | 5.5 to 7.0 |
| 2. Perennial ryegrass (turf-type) | 45 to 60 lbs. | 70 to 90 lbs. | 5.6 to 7.0 |
| + bluegrass | 70 to 90 lbs. | 105 to 135 lbs. | |
| 3. Tall fescue (turf-type)** | 130 to 170 lbs. | 195 to 250 lbs. | 5.6 to 7.5 |
| + bluegrass | 20 to 30 lbs. | 30 to 45 lbs. | |
| CHANNELS AND AREAS OF CONCENTRATED FLOW | | | |
| 1. Perennial ryegrass | 30 to 150 lbs. | 150 to 225 lbs. | 5.6 to 7.0 |
| + white or ladino clover* | 1 to 2 lbs. | 1 ½ to 3 lbs. | |
| 2. Kentucky bluegrass | 20 lbs. | 30 lbs. | 5.5 to 7.5 |
| + smooth bromegrass | 10 lbs. | 15 lbs. | |
| + switchgrass | 3 lbs. | 5 lbs. | |
| + timothy | 4 lbs. | 6 lbs. | |
| + perennial ryegrass | 10 lbs. | 15 lbs. | |
| + white or ladino clover* | 1 to 2 lbs. | 1 ½ to 3 lbs. | |
| 3. Tall fescue** | 100 to 150 lbs. | 150 to 225 lbs. | 5.5 to 7.5 |
| + ladino or white clover* | 1 to 2 lbs. | 1 ½ to 3 lbs. | |
| 4. Tall fescue** | 100 to 150 lbs. | 150 to 225 lbs. | 5.5 to 7.5 |
| + Perennial ryegrass | 15 to 20 lbs. | 22 to 30 lbs. | |
| + Kentucky bluegrass | 15 to 20 lbs. | 22 to 30 lbs. | |

* For best results: (a) legume seed should be inoculated; (b) seeding mixtures containing legumes should preferably be spring-seeded, although the grass may be fall-seeded and the legume frost-seeded; and (c) if legumes are fall-seeded, do so in early fall.
** Tall fescue provides little cover for, and may be toxic to, some species of wildlife. The IDNR recognizes the need for additional research on alternatives to tall fescue, such as buffalograss, orchardgrass, smooth bromegrass, and switch-grass. This research, in conjunction with demonstration areas, should focus on erosion control characteristics, wildlife toxicity, turf durability, and drought resistance.

## DORMANT AND FROST SEEDING

**Purpose:**
1. To provide early germination and soil stabilization in the spring.
2. To reduce sediment runoff to downstream areas.
3. To repair previous seedings.

**Requirements:**
Site and seedbed preparation: Graded, lime and fertilizer applied.

**Seed Selected:**
Selected on the basis of Site Conditions, Soil PH, intended land use, and expected level of maintenance. See Table for dormant or frost seeding recommendations.

**Fertilize:** According to soil test or use 400-600 lbs/acre 12-12-12 analysis or equivalent.

**Application:**
Dormant seeding is a temporary or permanent seeding application at a time when soil temperatures are too low for germination to occur (less than 50 °F) Frost seeding is a temporary or permanent seeding application in early spring when soils are in the freeze-thaw stage.

**For Dormant Seeding:** (Seeding dates: Dec. 1-Feb. 28)
1. Site preparation and mulching can be done months ahead of actual seeding, apply mulch upon completion of grading (Practice 3.15)
2. Broadcast fertilizer as recommended by soil test.
3. Broadcast seeding on top of the mulch and/or into existing ground cover at the rate shown on table. (if site preparation occurs within the recommended dates, fertilize and lime, seed, and mulch at the time.)

**For Frost Seeding:** (Seeding dates: Feb. 28 - Mar. 28)
1. Broadcast fertilizer as recommended by a soil test.
2. Select an appropriate seed species or mixture from table for temporary seeding or table for permanent seeding, and broadcast on to the seedbed or into the existing ground cover at the rate shown. (Do not work the seed into the soil.)

**Maintenance:**
1. Apply 200-300 lbs./acre of 12-12-12 or equivalent fertilizer between Apr. 15 and May 10 or during periods of vigorous growth.
2. Re-seed and mulch any areas that have inadequate cover by mid- to late April. For best results, re-seed within the recommended dates shown for temporary seeding or for permanent seeding.

**Temporary Dormant or Frost Seeding Recommendations.**

| Seed species* | Rate per acre |
|---|---|
| Wheat or rye | 150 lbs. |
| Spring oats | 150 lbs. |
| Annual ryegrass | 60 lbs. |

*Perennial species may be used as temporary cover, especially if the area to be seeded will remain idle for more than a year.

## MULCHING

**Purpose:** To promote seed germination and seedling growth, a temporary surface stabilization, and protecting the soil from wind and water impact.

**Requirements:**
Material: Straw, hay, wood fiber or excelsior, see table for Mulch Materials, Rates, and comments.
Comments:
Coverage: 75% of the soil surface
Anchoring: Required to prevent displacement by wind or water, see table for Mulch Anchoring Methods.

**Application:**
1. Apply mulch at the recommended rate.
2. Spread uniformly by hand, hay fork, mulch blower, or hydromulcher with no more than 25% of the surface visible.
3. Anchor immediately if using straw or hay, using one of the folliwing methods:
   - Crimp with mulch anchoring tool.
   - Hydromulch with short cellulose fibers.
   - Apply liquid tackifier.
   - Cover with netting secured with metal staples..

**Maintenance:**
1. Inspect after storm events to check for movement of mulch or for erosion.
2. If washout, breakage, or erosion is present, repair the surface, then re-seed, re-mulch.
3. Continue inspections until vegetation is firmly established.

**Exhibit 3.15-B. Mulch Materials, Rates, and Comments.**

| Material | Rate | Comments |
|---|---|---|
| Straw or hay | 1½-2 tons/acre | Should be dry, unchopped, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see *Exhibit 3.15-D*). |
| Wood fiber or cellulose | 1 ton /acre | Apply with a hydromulcher and use with tacking agent. |
| Long fiber wood (excelsior) | 1/2-3/4 ton/acre | Anchor in areas subject to wind. |

**Exhibit 3.15-D. Mulch Anchoring Methods.**

| Anchoring method | How to apply |
|---|---|
| Mulch anchoring tool OR Farm disk (dull, serrated, and set straight) | Crimp or punch the straw or hay into the soil 2-4 in. Operate machinery on the contour of the slope. |
| Cleating with dozer tracks | Operate dozer up and down slope, not across, or else the tracks will form rills. |
| Wood hydromulch fibers | Apply 1-2 tons/acre using a hydromulcher at a rate of 750 lbs./acre with a tacking agent (or according to contractor specifications). Do not use in areas of concentrated flow. |
| Asphalt emulsion | Emulsified asphalt should conform to the requirements of ASTM Spec. #977. Apply with suitable equipment at a rate of 0.05 gal./sq. yd. Do not use in areas of concentrated flow. |
| Synthetic tackifier, binder or soil stabilizer | Apply according to manufacturer's recommendation. |
| Biodegradable netting (polypropylene or similar material)* | Apply over mulch and staple with 6-8 in. wire staples. Follow manufacturer's recommendations for installation. Best suited to slope application. |

* Install the netting immediately after applying the mulch. In areas of concentrated water flow, lay it parallel to the direction of flow; on other slopes, lay it either parallel or perpendicular to direction of flow. Edges of adjacent netting strips should overlap 4-6 in., with the strip on the upgrade side of any lateral water flow on top. Installation details are site specific, so follow manufacturer's directions.

## SELF-MONITORING PROGRAM

A self-monitoring program that includes the following must be implemented at all permitted project sites:

1. A trained individual shall perform a written evaluation of the project site a minimum of one (1) time per week and by the end of the next business day following each measurable storm event.
2. The evaluation must address the maintenance of existing storm water quality measures to ensure they are functioning properly and identify additional measures necessary to remain in compliance with all applicable statutes and rules.
3. Written evaluation reports must include:
   a. the name of individual performing the evaluation;
   b. the date of evaluation;
   c. problems identified at the project site; and
   d. details of corrective actions recommended and completed.
4. All evaluation reports for the project site must be made available to the MS4 Operator or other designated entity within forty-eight (48) hours of a request.
5. Evaluation reports must be maintained for a period of two (2) years from date of NOT.
6. All evaluation reports will be submitted to the Town of Munster when requested.

Date: _____
Project: _____
Inspected by: _____
Type of Inspection: Scheduled Weekly Rain Event

CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG
(To be Completed by Property Owner or Agent)

All stormwater pollution prevention BMPs shall be inspected and maintained as needed to ensure continued performance of their intended function during construction and shall continue until the entire site has been stabilized and a Notice of Termination has been issued. An inspection of the project site must be completed by the end of the next business day following each measurable storm event. If there are no measurable storm events within a given week, the site should be monitored at least once in that week. Maintenance and repair shall be conducted in accordance with the accepted site plans. This log shall be kept as a permanent record and must be made available to **the Town of Munster Town** Engineer, in an organized fashion, within forty-eight (48) hours upon request.

| Yes | No | N/A | |
|---|---|---|---|
| | | | 1. Are all sediment control barriers, inlet protection and silt fences in place and functioning properly? |
| | | | 2. Are all erodible slopes protected from erosion through the implementation of acceptable soil stabilization practices? |
| | | | 3. Are all dewatering structures functioning properly? |
| | | | 4. Are all discharge points free of any noticeable pollutant discharges? |
| | | | 5. Are all discharge points free of any noticeable erosion or sediment transport? |
| | | | 6. Are designated equipment washout areas properly sited, clearly marked, and being utilized? |
| | | | 7. Are construction staging and parking areas restricted to areas designated as such on the plans? |
| | | | 8. Are temporary soil stockpiles in approved areas and properly protected? |
| | | | 9. Are construction entrances properly installed and being used and maintained? |
| | | | 10. Are "Do Not Disturb" areas designated on plan sheets clearly marked on-site and avoided? |
| | | | 11. Are public roads at intersections with site access roads being kept clear of sediment, debris, and mud? |
| | | | 12. Is spill response equipment on-site; logically located; and easily accessed in an emergency? |
| | | | 13. Are emergency response procedures and contact information clearly posted? |
| | | | 14. Is solid waste properly contained? |
| | | | 15. Is a stable access provided to the solid waste storage and pick-up area? |
| | | | 16. Are hazardous materials, waste or otherwise, being properly handled and stored? |
| | | | 17. Have previously recommended corrective actions been implemented? |

If you answered "no" to any of the above questions, describe any corrective action which must be taken to remedy the problem and when the corrective actions are to be completed.

REPORT SAMPLE

## SPILL PREVENTION AND RESPONSE

**Purpose:** Procedures and practices to prevent and control spills in a manner that minimizes or eliminates the discharge of spilled material to the drainage system or watercourses.

**Hazardous Waste Products:**
- Petroleum Products,
- Asphalt Products,
- Concrete Curing Compounds,
- Pesticides,
- Acids,
- Paints,
- Stains,
- Solvents,
- Wood Preservatives,
- Roofing Tar, or

**Other Waste Products:**
- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals
- Fuels
- Lubricants
- Other petroleum distillates

Any materials deemed a hazardous waste in 40 CFR Parts 110, 117, 261, or 302

**Spill Prevention Practices:**
The following are management practices used for reduction of spills and other accidental exposure of materials and substances to storm water runoff.
a. The contractors and subcontractors shall refer to the Material Safety Data Sheet (MSDS) for information on the proper storage, use, and clean-up methods for all materials anticipated being on the project site.
b. All required materials for spill clean up and disposal of all onsite materials shall be kept on site in a project trailer with easy access for all users of associated materials.
c. All disposals of spilled materials shall be done in accordance with Federal, State and Local waste disposal regulations. All contractors and subcontractors shall be responsible for any and all spills associated with their work.
d. Prompt cleanup of any spills that may occur of liquid or dry materials.
e. Cleanup of sediments that have been tracked by vehicles or have been transported by wind or storm water about the site or onto nearby roadways.

**Response Practices:**
In the event that a large spill occurs (that which requires extensive cleanup actions, refer to MSD sheets for information), the following procedures shall be followed to minimize exposure of the material.

a. Immediate action shall be taken to control and contain the spill to prevent it from entering any nearby storm sewer structures or open waters.
b. Notify the Town of Munster Fire Department at 911 for all combustible and flammable materials.
c. Notify the Federal Emergency Spill Hotline at 1-800-424-8802 within 2 hours for spills above the reported allowable quantity, or if the material enters any nearby storm sewer structures or open waters.
d. Notify the Indiana Emergency Response Hotline at 1-888-233-7745.
e. The spill area shall be isolated from all surrounding areas with absorbent pads, booms, and pillows designed for the use of spill containment and absorption.
f. The spill kits that are required to be on site shall be utilized.
g. Emergency Response teams shall be contacted for extensive spills above and beyond the containment by available methods.

**Waste Disposal Management Practices:**
All solid waste associated with the construction and development of this project shall be removed and disposed of properly with in all applicable state and federal laws associated with the waste generated. Developer and/or contractor are to provide on-site dumpsters, rented from a licensed solid waste management company, to ensure waste is collected and disposed of properly. All trash and construction debris from the site will be deposited in a dumpster. No construction waste will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal.

a. Select a designated waste collection area onsite.
b. Provide an adequate number of containers with lids or covers throughout the site, and frequent pickups
c. Provide immediate cleanup of any container spills.
d. Make sure that construction waste is collected, removed, and disposed of only at authorized areas.

DONALD C. TORRENGA
REGISTERED
No. 19868
STATE OF INDIANA
PROFESSIONAL ENGINEER


TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com


KIDDIE ACADEMY
10419 CALUMET AVENUE
MUNSTER, IN 46321
SWPPP DETAILS & SPECIFICATIONS

REVISIONS:
DATE: 07-26-2019

CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017-5065
SCALE: AS SHOWN

SHEET
C-6.0


FILE NO:Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 SWPPP Details.dwg 7/24/2019 9:58:26 AM CDT

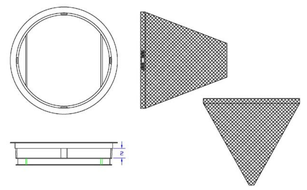
## BASKET INLET / CATCH BASIN PROTECTION

**Purpose:** To prevent excessive sediment from entering storm sewers at inlet/catch basin, allowing full use of the storm drain system during the construction period.

**Requirements:** Steel Frame with top width-length dimensions such that the basket fits into the inlet and/or catch basin (circular and/or rectangular), and a replaceable Geotextile fabric bag attached with a steel band locking cap that is suspended from the frame, **Catch -all Inlet Protector Hancor Flo-Gard bt Nyloplast** or approved equal.

**Installation:**
1. Install protection to existing and newly installed inlet/catch basin in a new development before land disturbing activities begin in a stabilized area.
2. Remove the grate, and place the basket assembly under the grate on the lip of the structure frame.
3. Replace the inlet/catch basin grate.

**Maintenance:**
1. Inspect weekly during construction and after each storm event of a minimum of 1/2 inch rainfall, and remove built-up sediment.
2. Replace bag every six (6) months.
3. Replace the Geotextile fabric bag if there is a hole and/or won't pass water.
4. Replace the Geotextile fabric bag after any oil, gasoline or solvent spill.



GENERAL NOTES:
FRAME: Top flange fabricated from 1¼"x1¼"x¼" angle. Base rim fabricated from 1½"x½"x¼" channel. Handles and suspension brackets fabricated from 1¼"x¼" flat stock. All steel conforming to ASTM-A36.
SEDIMENT BAG: Bag fabricated from 4 oz./sq.yd non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel band and lock.

TYPICAL INLET/CATCH BASIN PROTECTION
INSERT DETAIL

## STREET AND PARKING LOT SWEEPING

**Purpose:** To reduce the amount of pollutants that get washed into the storm drain and ultimately transported and deposited in waterbodies.

**Application:**
1. Sweeping at points of egress where sediment is tracked from project site onto public or private streets and roads.

**Limitations:**
1. Sweeping may be ineffective if soil is wet or heavy accumulation of mud.
2. May require repeat cleanings.

**Maintenance:**
1. Inspect potential sediment tracking ingress and egress points locations daily, and after rain events.
2. Visible sediment observed outside the construction limits shall be swept and removed daily.
3. Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
4. If not mixed with debris or trash, consider incorporating the removed sediment back into the project.
5. Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
6. Adjust brooms frequently; maximize efficiency of sweeping operations.
7. After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

## SILT FENCE

**Purpose:** To retain sediment from small sloping disturbed areas by reducing the velocity of sheet flow.

**Requirements:**
Trench: 6" minimum depth, flat bottom , filled with compacted soil to bury lower portion of fence fabric.

Support : 2" x 2" hardwood stakes set at least 8-inches to 12-inches deep.

Spacing of Support: 6-foot maximum on center.

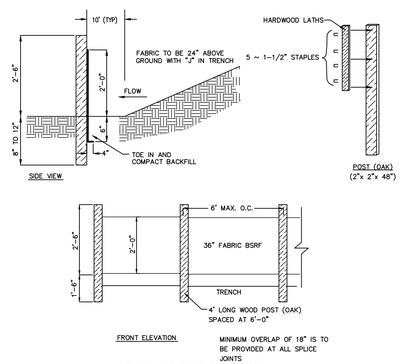
Fence height: A 2-ft. minimum or high enough so depth of impounded water does not exceed one-half the height of the fence at any point along the line.

Attachement: Hardwood laths secured to stakes with five (5) 1-1/2 inch staples.

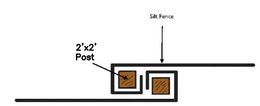
Fence Fabric: Spunbound polyester material with a fiberglass scrim or net sandwiched in between the layers, **SS-700 SiltSaver** or approved equal.

**Installation:**
1. Along the entire intended fence line, maintain contour as much as possible, dig a 6" deep flat bottom trench.
2. On the downslope side of the trench, drive the post 8" to 12" into the ground.
3. Run a continuous length of fence fabric along upslope side of posts.
4. Fasten fence fabric to the upslope side of the stakes, extending it into the trench, and securing it with hardwood laths secured with five (5) 1-1/2 staples. The bottom 12" of the fence fabric shall be left unsecured to allow for entrenchment.
5. If a joint is necessary, staple the overlap to the nearest post with a wood lath.
6. Place the bottom 1' of fabric in the 6" deep trench, extending the remaining 4" of fabric toward the upslope side.
7. Backfill the trench with compacted earth.

**Maintenance:**
1. Inspect silt fence once every seven calendar days and 24 hours after each storm event of minimum of 1/2 inch rainfall.
2. If fence fabric tears, starts to decompose, or becomes ineffective, replace the affected portion, as outlined by the manufacturer.
3. Remove deposited sediment when it reaches one-half the height of the fence at its lowest point or is causing the fabric to bulge.
4. Take care to avoid undermining the fence during clean out.
5. After watershed has been stabilized, remove fence and sediment deposits, bring the disturbed area to grade and stabilize.




BELTED SILT RETENTION FENCE




Silt Fence Wrap Joint Detail

## TOPSOIL SALVAGE & UTILIZATION

**Purpose:** To provide a method of preserving topsoil for use in establishing vegetation to achieve final site stabilization.

**Specifications:**
Material
Typically the darker, friable, loamy surface layer of soil found immediately below vegetation.

Storage Area
1. Free of stumps, rock, and construction debris.
2. Stockpile covered with vegetation or a tarp.
3. Surrounded by a sediment barrier or sediment filter.
4. Stockpile outside rooting zone of trees to be protected.

**Application:**
Salvaging and Stockpiling Topsoil
1. Determine depth and suitability of topsoil at site.
2. Prior to stripping topsoil, install any site-specific down slope measures needed to control storm water runoff and sedimentation.
3. Remove soil material no deeper than the "surface soil".
4. Stockpile the material in accessible locations that will not interfere with other construction activities or block drainage.
5. Stockpiled soil should be temporarily seeded and surrounded by a sediment control measure.

Spreading Topsoil
1. Prior to applying topsoil, grade the subsoil and roughen the top three to four inches by disking.
2. Apply topsoil evenly to a depth of a minimum of four inches, then compact slightly to improve contact with the subsoil.
3. Do not apply topsoil when the site is wet, muddy, or frozen.
4. After spreading the topsoil, grade and stabilize the site.

**Maintenance:**
1. Inspect daily.
2. Check for damage to perimeter barrier; repair immediately.
3. Check for erosion or damage to newly spread topsoil; repair immediately and revegetate.

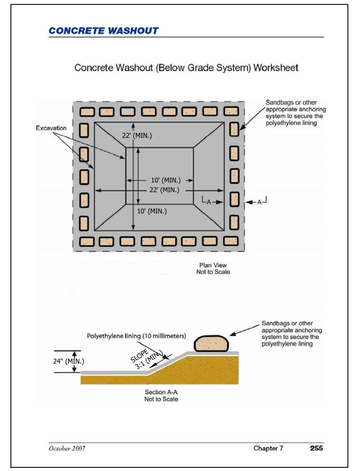
## CONCRETE WASHOUT

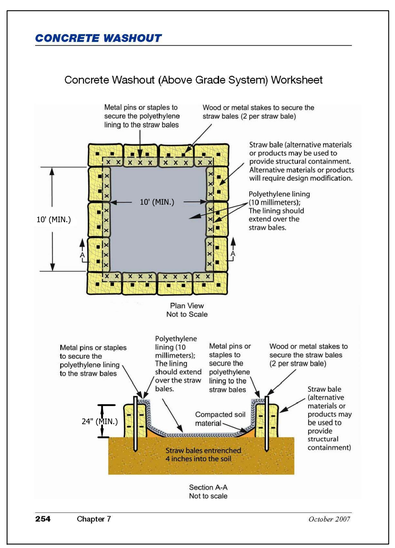
**Purpose:** To reduce the discharge of pollutants associated with concrete waste through consolidation of solids and retention of liquids.

**Requirements:**
1.) Locate concrete washout systems at least 50 feet from any creeks, wetlands, ditches, karst features, or storm drains/manmade conveyance systems.
2.) Locate concrete washout systems in relatively flat areas with established vegetative cover and do not receive runoff from adjacent land areas.
3.) Locate in areas that provide easy access for concrete trucks and other construction equipment.
4.) Locate away from other construction traffic to reduce the potential for damage to the system.
5.) Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining.
6.) Signage.
7.) Orange safety fencing or equivalent.
8.) Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile fabric), soil material, or other appropriate materials that can be used to construct a containment system (above grade systems).

**Installation:**
1.) Dependent upon the type of system, either excavate the pit or install the containment system.
2.) A base shall be constructed and prepared that is free of rocks and other debris that may cause tears or punctures in the polyethylene lining.
3.) Install the polyethylene lining. For excavated systems, the lining should extend over the entire excavation. The lining for bermed systems should be installed over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, staples, or other fasteners.
4.) Place flags, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.
5.) Place a non-collapsing, non-water holding cover over the washout facility prior to a predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).
6.) Install signage that identifies concrete washout areas.
7.) Post signs directing contractors and suppliers to designated locations.

**Maintenance:**
1.) Inspect daily and after each storm event.
2.) Inspect the integrity of the overall structure including, where applicable, the containment system.
3.) Inspect the system for leaks, spills, and tracking of soil by equipment.
4.) Inspect the polyethylene lining for failure, including tears and punctures.
5.) Once concrete wastes harden, remove and dispose of the material.
6.) Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.
7.) Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
8.) Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.
9.) The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.
10.) The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.
11.) Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further dewatering.
12.) Prefabricated units are often pumped and the company supplying the unit provides this service.
13.) Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate action.
14.) When concrete washout systems are no longer required, the concrete washout systems shall be closed. Dispose of all hardened concrete and other materials used to construct the system.
15.) Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.





TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com


KIDDIE ACADEMY
10419 CALUMET AVENUE
MUNSTER, IN 46321
SWPPP DETAILS & SPECIFICATIONS

REVISIONS:
DATE: 07-26-2019

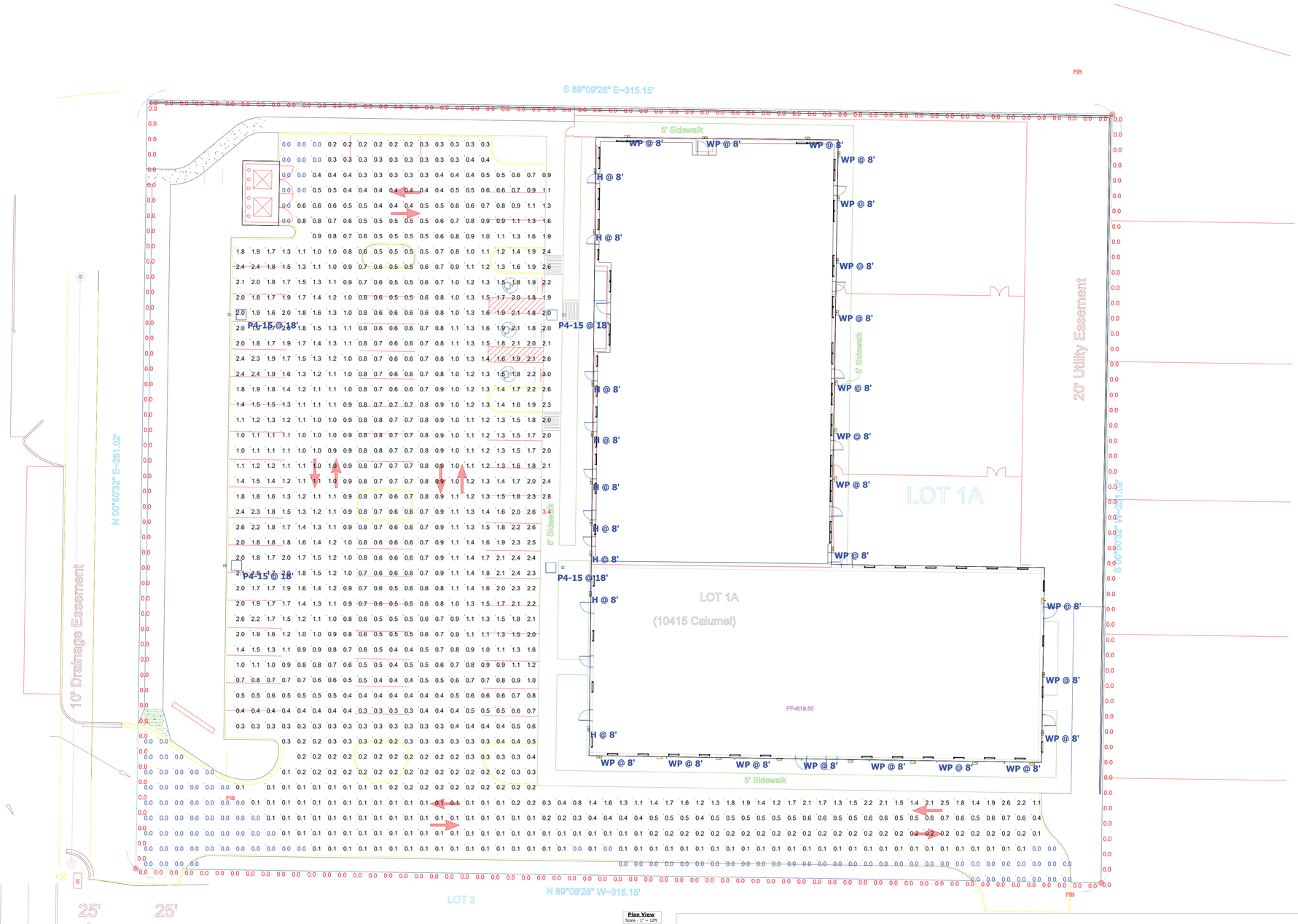
CLIENT:
Baker & Associates, Architects
Attn: Sam Baker
673 High Street
Worthington, OH 43085

JOB NO: 2017-5065
SCALE: AS SHOWN

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

SHEET
C-6.1


FILE NO: Z:\2019-5016 Kiddie Academy Addition Munster\dwg\2019-5016 SWPPP Details.dwg 7/24/2019 9:58:26 AM CDT




Plan View
Scale - 1" = 12ft

## Schedule

| Symbol | Label | Quantity | Manufacturer | Catalog Number | Light Loss Factor | Wattage |
|---|---|---|---|---|---|---|
| | P4-15 | 4 | EATON - LUMARK (FORMER COOPER LIGHTING) | PRV-C15-D-UNV-T4-BZ-HSS | 1 | 52 |
| | H | 9 | FC/SSL Lighting | FCW3262 | 1 | 20 |
| | WP | 21 | EATON - LUMARK (FORMER COOPER LIGHTING) | XTOR3B | 1 | 25.5 |

## Statistics

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| Parking Lot | + | 0.8 fc | 3.4 fc | 0.0 fc | N/A | N/A |
| Property Line | + | 0.0 fc | 0.0 fc | 0.0 fc | N/A | N/A |

Luminaires & Lamps Furnished By Villa Lighting Inc. St Louis, MO. 63103
(800)325-0693
www.villalighting.com

The electrical contractor shall be responsible for receiving, storage, installation and wiring of light fixtures.

The electrical contractor shall report any damaged light fixtures or missing parts to Villa Lighting within 48 hours of receipt of light fixture package.

Design is based on current information provided at the time of request. Any changes in mounting height, mounting location, lamp wattage, lamp type, and existing field conditions that effect any of the previously mentioned will void the current layout and require a change request and recalculation. Calculations are based upon a computer simulation and actual field calculations may vary.

Light level calculated on the ground

# KIDDIE ACADEMY - MUNSTER, IN

Designer
Steve Breidenbach
Date
8/7/2019

## LANDSCAPE ORDINANCE INFORMATION FOR C-1 ZONING- MUNSTER, INDIANA

| SPECIFIC ORDINANCES FOR C-1 DISTRICT | CODE REQUIRES | PROVIDED |
|---|---|---|
| SECTION 3 – LANDSCAPE LOT COVERAGE | 7.5% OF LOT LANDSCAPED | LANDSCAPE AREA = 17.7%<br>LOT AREA = 79,108.95<br>LANDSCAPE AREA = 13,998.00 |
| SECTION 3 – PARKING LOT PERIMETER PLANTS | 1 SHADE TREE 30' APART CONTINUOUS HEDGE 30" | SHADE TREES PROVIDED<br>PLANT SCREEN PROVIDED |
| SECTION 3 – PARKING LOT INTERIOR PLANTS | 1 TREE PER 125 S.F PLANTING ISLAND | 1 SHADE TREE PROVIDED |
| SECTION 3 – LANDSCAPE MATERIALS SIZES AND APPROVED SPECIES | 2" CALIPER TREES, B&B<br>30–49" TALL SHRUBS | PLANTINGS PROVIDED MEET OR EXCEED TOWN ORDINANCES |

## PLANT SCHEDULE

| KEY | QTY. | BOTANICAL NAME | COMMON NAME | SIZE | COMMENTS |
|---|---|---|---|---|---|
| AFA | 12 | ACER F. 'ARMSTRONG' | ARMSTRONG MAPLE | 2" CAL. | B.B. |
| AFM | 6 | ACER F. 'MARMO' | MARMO MAPLE | 2" CAL. | B.B. |
| AIB | 40 | ARONIA M. 'IROQUOIS BEAUTY' | IROQUOIS BEAUTY CHOKEBERRY | 3 GAL. | CONTAINER |
| ASM | 81 | ALLIUM 'MILLENIUM' | MILLENIUM ALLIUM | 1 GAL. | CONTAINER |
| BGV | 17 | BUXUS 'GREEN VELVET' | GREEN VELVET BOXWOOD | 3 GAL. | CONTAINER |
| CKF | 57 | CALAMOGROSTIS X. 'KARL FOERSTER' | KARL FOERSTER FEATHER REED | 3 GAL. | CONTAINER |
| GTS | 8 | GLEDITSIA T.I. 'SKYLINE' | SKYLINE HONEYLOCUST | 2" CALIPER | B.B. |
| HHR | 11 | HEMEROCALLIS 'HAPPY RETURNS' | HAPPY RETURNS DAYLILY | 1 GAL. | CONT. |
| JCP | 70 | JUNIPERUS C. 'PFITZER KALLAY' | KALLAY COMPACT JUNIPER | 3 GALLON | CONT. |
| NBW | 80 | NEPETA 'BLUE WONDER' | BLUE WONDER CATMINT | 1 GAL. | CONTAINER |
| SMP | 88 | SYRINGA PENDA 'BLOOMERANG' | BLOOMERANG DWARF LILAC | 3 GAL. | CONT. |
| SRI | 4 | SYRINGA RETICULATA 'IVORY SILK' | IVORY SILK TREE LILAC | 2" CAL. | B.B. TREE FORM |

## LAWN SEEDING NOTES

MIXTURE IS INDIANA DEPT. OF HIGHWAYS "INDIANA SEED MIXTURE 'U' BY NATIONAL SEED TURFGRASS SEED. PHONE: 1–888–963–7333. NO SUBSTITIONS WILL BE ACCEPTED UNLESS IDENTICAL TO THE SPECIFIED MIX. SEED WITH A DROP OR ROTARY SPREADER AT A RATE OF 3.5 LBS. PER 1000 S.F. OR 218 LBS. PER ACRE. OVERSEEDING RATE SHALL BE 2.5 LBS. PER 1000 S.F. WITH USE OF A SLIT SEEDER. THE INTENT OF THIS SEED MIX IS TO PROVIDE A LOW MAINTENANCE GRASS. THE GRASS PERFORMS BEST IN FULL SUN AND HAS REDUCED FERTILITY REQUIREMENTS.

CALL HOLY MOLEY TOLL FREE
1 (800) 382-5544
OPERATES 24 HOURS A DAY 365 DAYS A YEAR

WARNING
CALL BEFORE YOU DIG
CALL
1 (800) 382-5544
48 HOURS BEFORE YOU DIG

## CERTIFIED STATEMENT

The undersigned acknowledges that that the landscape plan shown for the property at 10419 Calumet Avenue, Town of Munster, Indiana has to the best of the undersigned applicant's knowledge, been designed and will be installed, maintained and replaced as required by current and subsequent owners in accordance with the requirements of the Town of Munster Municipal Code, the landscaping standards of the Town of Munster Zoning Ordinance, and the Guide to the Town of Munster Landscape Ordinance.

signed _____ date July 26, 2019

The undersigned landscape architect, registered in the State of Indiana, acknowledges that the landscape planting plan and construction details shown on the attached landscape plan for the property at 10419 Calumet Avenue, Town of Munster, Indiana has been designed in accordance with the requirements of the Town of Munster Zoning Ordinance, and the Guide to the Town of Munster Landscape Ordinances.

## INSTRUCTIONAL SIGN

The Owner of this site has agreed to install and maintain the required landscaping on this site in accordance with the Town of Munster Landscape Ordinance. Compliance requires the following:
New trees will be watered for the first two years until firmly established.
New trees and shrubs will be pruned to remove dead or damaged wood.
Mulch in planting beds will be maintained at a depth of 3".
All planting beds and tree mulch circles will be weeded regularly.
Perennials and herbaceous shrubs will be pruned before the onset of new spring growth.
All grass will be mowed regularly (i.e. once per week) during the growing season.

The Instructional sign will be posted on site on an 11x17 laminated sign and a copy of the approved landscape plan will posted on an 11x17 laminated sign.

## IRRIGATION NOTES

IRRIGATION SYSTEM DESIGNER
AQUALIFIED IRRIGATION DESIGNER OR IRRIGATION CONSULTANT SHALL DESIGN THE SYSTEM FOR EFFICIENT AND UNIFORM DISTRIBUTION OF WATER. "QUALIFIED" MEANS CERTIFIED BY THE IRRIGATION ASSOCIATION OF AMERICA:
CERTIFIED IRRIGATION CONTRACTOR (CIC)
CERTIFIED LANDSCAPE IRRIGATION AUDITOR (CLIA)
CERTIFIED LANDSCAPE IRRIGATION MANAGER (CLIM)
CERTIFIED IRRIGATION DESIGNER (CID)
CERTIFIED WATER CONSERVATION MANAGER–LANDSCAPE (CWCM)

SYSTEM DESIGN
THE SYSTEM SHALL BE COMPRISED OF EITHER:
DRIP/MICRO–IRRIGATION COMPONENTS THAT ALLOW FOR HIGHER DISTRIBUTION UNIFORMITY AND LOWER EVAPORATION AND RUNOFF.
THE DESIGN AND LAYOUT OF THE EMISSION DEVICES PROVIDES FOR ZERO OVERSPRAY ACROSS OR ONTO A STREET, PUBLIC DRIVEWAY OR SIDEWALK, PARKING AREA, BUILDING, FENCE OR ADJOINING PROPERTY. oVERSPRAY MAY OCCUR DURING THE OPERATION OFTHE IRRIGATION SYSTEM DUE TO THE ACTUAL WIND CONDITION THAT DIFFER FROM THE DESIGN CRITERIA.

SYSTEM CONTROLLER
THE SYSTEM SHHOULD USE A CONTROLLER THAT HAS MULTI–PROGRAM CAPABILITY WITH AT LEAST FOUR START TIMES(FOR MULTILE REPEAT SOAK CYCLES) AND RUN TIME ADJUSTMENT IN ONE MINUTE INCREMENTS. THE CONTROLLER PROGRAMMING (SCHEDULING) SHOULD BE MANAED TO RESPOND TO THE CHANGING NEED FOR WATER IN THE LANDSCAPE.

DESIGN FEATURES
fOLLOW ALL ORDINANCES RELATING TO IRRIGATION SYSTEMS INCLUDING THE INSTALLATION OF BACKFLOW DEVICES.
A DESIGN THAT RESULTS IN UNIFORM AND EFFICIENT COVERAGE. SPRINKLER HEAD SPACING SHOULD BE
A MINIMUM OF "HEAD–TO–HEAD" (MINIMUM 50% OF DIAMETER) UNLESS THE COVERAGE IS DESIGNED FOR WIND DE–RATING. WIND DE–RATING SHOULD BE BASED ON AVERAGE NIGHTTIME WIND SPEED.

A MINIMUM OF "HEAD–TOHEAD" (MINIMUM OF 50% OF DIAMETER) UNLESS THE COVERAGE IS DESIGNED FOR WIND DE–RATING.. WIND DE–RATING SHOULD BE BASED ON AVERAGE NIGHTTIME WIND SPEED. DESIGN TO AVOID OVERSPRAY ONTO HARDSCAPES, FENCES, BUILDINGS AND ADJOINING PROPERTY.
HAVE SEPARATE STATIONS/ZONES (HYDROZONES) FOR AREAS WITH DISSIMILAR WATER OR SCHEDULING REQUIREMENTS.
HAVE A MINIMUM OF A RAIN SENSOR TO SUSPEND IRRIGATION DURING WET WEATHER CONDITIONS.
IN ADDITION TO THE RAIN SENSO, USE ANY OR ALL WATER–CONSERVING DEVICES SUCH AS:
CHECK VALVES TO MINIMIZE LOW–HEAD DRAINAGE
PRESSURE REGULATORS OR PRESSURE COMPENSATING SCREENS, STEMS OR NOZZZLES TO CONTROL HIGH PRESSURE.
ENVIRONMENTAL SENSORS THAT CAN ACTIVELY MEASURE WEATHER CONDITIONS TO DETERMINE DAILY PANT WATER NEED.
SOIL MOISTURE SENSORS TO MONITOR SOIL MOISTURE AND SUSPEND IRRIGATION IF THE MOISTURE RESERVE IN THE ROOT ZONE IS SIGNIFICANTLY ABOVE THE ALLOWABLE DEPLETION LIMIT.
FOR COMMERCIAL INSTALLATIONS: A WATER METER DEDICATED TO MEASURING ONLY LANDSCAPE WATER USE. A METER WITH A FLOW RATE OUTPUT SIGNAL FOR INTERFACING WITH THE CONTROLLER IS RECOMMENDED AS IT CAN HELP DETECT LEAKS AND MANAGE WATER USE.
INSTALL A MASTERV VALVE TO STOP UNSCHEDULED FLOW OF IRRIGATION WATER.

## LANDSCAPE LEGEND

1. LAWN (SEED)
2. LAWN (SOD)
3. 3" LAYER OF HARDWOOD BARK

GRAPHIC SCALE
30 0 15 30 60 120
( IN FEET )
1 inch = 30 ft.

## LANDSCAPE NOTES

IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT LIST, THE GRAPHIC SYMBOLS SHOWN ON THE PLAN SHALL DICTATE
ALL SHRUB PLANTING AREAS TO BE COVERED W/ 3" LAYER OF SHREDDED HARDWOOD BARK MULCH.
ALL GROUND COVER BEDS SHALL BE COVERED W/ 3" SHREDDED HARDWOOD BARK MULCH. MULCH SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND SHALL BE UNIFORM IN TEXTURE AND COLOR AND SHALL BE OBTAINED FROM SAWMILL OR LUMBERING OPERATION. NO UTILITY MULCH OR PROCESSED TREE TRIMMINGS WILL BE ALLOWED.
FINAL PLACEMENT OF PLANT MATERIALS, ETC., SHALL BE APPROVED BY LANDSCAPE ARCHITECT BEFORE PLANTING OPERATIONS ARE TO PROCEED. ALL TREE LOCATIONS SHALL BE MARKED WITH A WOOD STAKE INDICATING VARIETY AND SIZE OF TREE. ALL GROUND COVER AND PLANTING BED LINES SHALL BE MARKED W/ HIGHLY VISIBLE PAINT LINES W/ OCCASIONAL WOOD STAKES FOR REFERENCE. ALL STAKES SHALL BE REMOVED FOLLOWING PLANTING OPERATIONS. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANT LOCATIONS ON SITE.
NO SUBSTITUTIONS OF PLANT MATERIALS WILL BE ALLOWED. IF PLANTS ARE NOT AVAILABLE, THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT PRIOR TO BID IN WRITING. ALL PLANTS SHALL BE INSPECTED AND TAGGED WITH PROJECT I.D. AT NURSERY OR CONTRACTORS OPERATIONS PRIOR TO MOVING TO JOB SITE. PLANTS MAY BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE BY LANDSCAPE ARCHITECT.
ALL LANDSCAPE PLANTINGS TO BE MAINTAINED BY CONTRACTOR FOR 60 DAYS MIN. FOLLOWING COMPLETE INSTALLATION AND FINAL INSPECTION BY LANDSCAPE ARCHITECT. ALL SEEDED LAWNS SHALL BE MAINTAINED FOR 60 DAYS MIN. AND SODDED LAWNS 30 DAYS MIN. FOLLOWING COMPLETE INSTALLATION AND FINAL INSPECTION BY LANDSCAPE ARCHITECT AFTER WRITTEN REQUEST FROM LANDSCAPE CONTRACTOR. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, MULCHING, MOWING, AND ALL OTHER NECESSARY OPERATIONS REQUIRED FOR PROPER ESTABLISHMENT OF LAWNS AND PLANTINGS.
CONTRACTOR TO SUBMIT UNIT PRICES ON EVERY TYPE OF WORK AS REQUIRED BY LANDSCAPE ARCHITECT.

ALL LANDSCAPE PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FOLLOWING FINAL INSPECTION BY LANDSCAPE ARCHITECT. AT THE END OF THIS PERIOD, PLANT MATERIAL TERMED DEAD OR UNSATISFACTORY BY LANDSCAPE ARCHITECT SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE LANDSCAPE CONTRACTOR. THE REPLACEMENTS SHALL ALSO BE GUARANTEED FOR 1 YEAR.

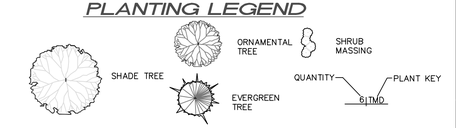
AN APPROVED PRE–EMERGENT HERBICIDE SHALL BE APPLIED IN ALL PLANTING BEDS AT A RATE SPECIFIED BY MANUFACTURER FOR EACH PLANT VARIETY.

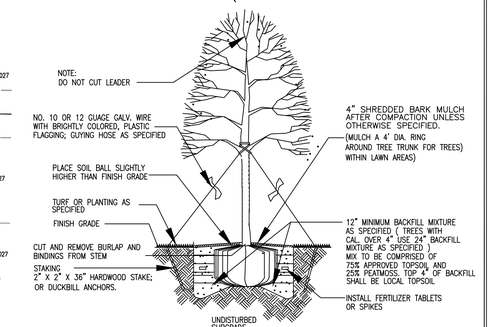
ALL PLANTS SHALL MEET OR EXCEED AMERICAN STANDARDS FOR NURSERY STOCK, 1986 EDITION, AS SET FORTH BY AMERICAN ASSOCIATION OF NURSERYMEN.

PLANTS AND ALL OTHER MATERIALS TO BE STORED ON SITE WILL BE PLACED WHERE THEY WILL NOT CONFLICT W/ CONSTRUCTION OPERATIONS AND AS DIRECTED BY LANDSCAPE ARCHITECT.
THE LANDSCAPE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES THAT MAY BE REQUIRED FOR HIS PORTION OF WORK.
PEATMOSS TO BE USED ON PROJECT SHALL BE DOMESTIC OR IMPORTED MATERIAL, CHOCOLATE BROWN IN COLOR AND COMPOSED OF PARTIALLY DECOMPOSED VEGETABLE MATERIAL. PEAT MOSS TO BE MILDLY ACIDIC IN CHARACTER AND SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IN WRITING PRIOR TO BID DATE OF ANY PLANTS HE/SHE FEELS MAY NOT SURVIVE IN LOCATIONS NOTED ON PLANS.

IRRIGATION SYSTEM– PROVIDE A LANDSCAPE IRRIGATION SYSTEM. PROVIDE A BACKFLOW PREVENTER PER LOCAL CODE. PROVIDE A CONTROLLER. LAWN ZONES ARE TO BE COVERED BY SPRAY HEADS OR ROTARY HEADS. ALL SHRUBS BEDS ARE TO BE IRRIGATED WITH DRIP (NETAFIM).

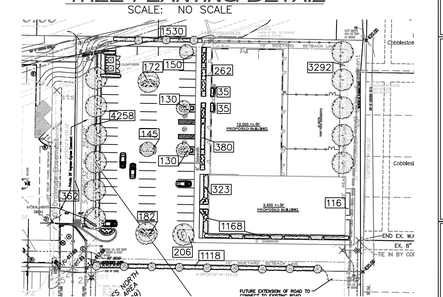
## PLANTING LEGEND




## TREE PLANTING DETAIL

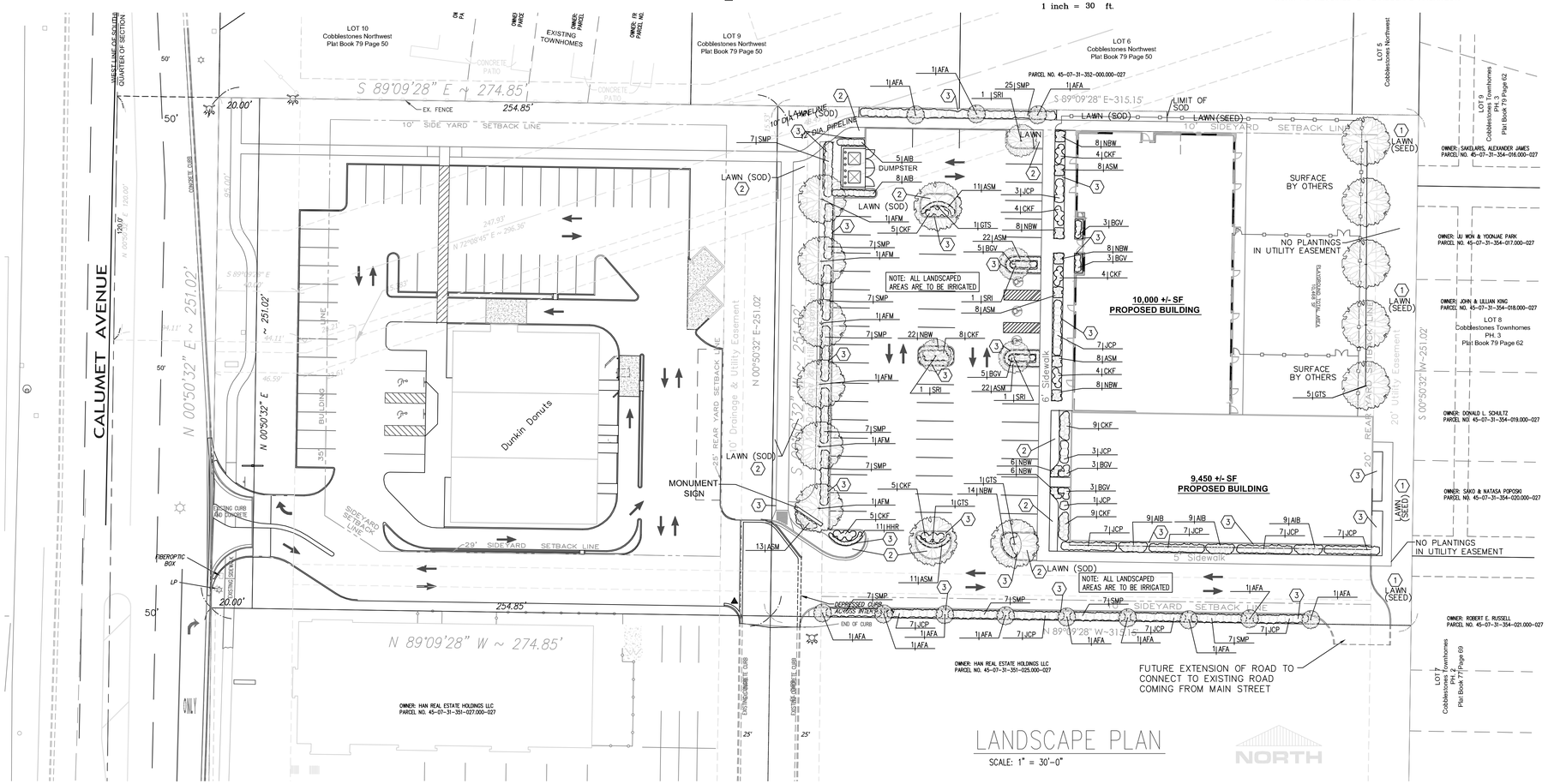
SCALE: NO SCALE



## LANDSCAPE AREA CALCULATION PLAN

LANDSCAPE AREAS ARE LISTED IN BOXES, TOTAL AREAS = 13, 998.0 S.F.

SCALE: NO SCALE




## LANDSCAPE PLAN

SCALE: 1" = 30'–0"

PLANNED ENVIRONMENT ASSOCIATES
P.O. BOX 2256
CHESTERTON, IN 46304
(219) 299.3383
www.planvron.com

STUART E. FRANZEN REGISTERED No. LA80050131 JULY 1, 1982 STATE OF INDIANA LANDSCAPE ARCHITECT

CERTIFIED BY


TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836–8918
website: www.torrenga.com


KIDDIE ACADEMY
LANDSCAPE PLAN
MUNSTER, IN 46321

REVISIONS:
08–5–2019
07–26–2019
01–26–2018
DATE: 01–05–2018

CLIENT:
Baker & Associates, Architects
ATTN: Sam Baker
6731 Worthington Way
Worthington, OH 43085

JOB NO: 2017–5065
SCALE: 1" = 30'

SHEET
L–1.0

FILE NO:Z:\2017-5065 Kiddie Academy\dwg\2017-5065 Kiddie Academy.dwg 1/5/2018 11:34:44 AM CST

M1 LEFT ELEVATION (NORTH)

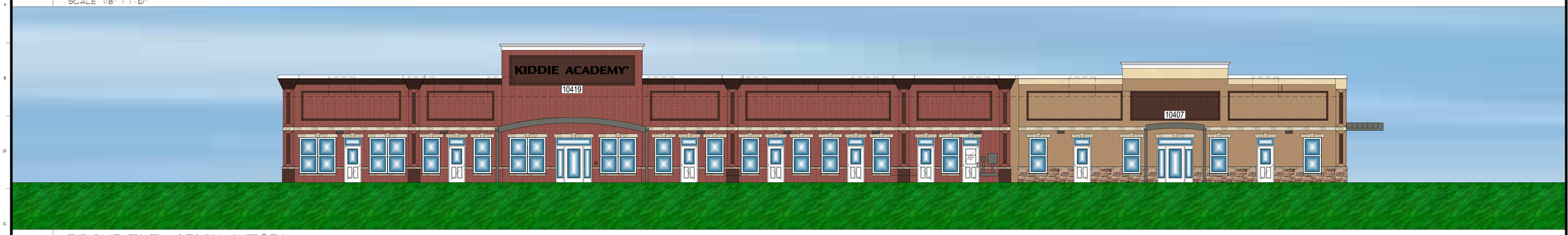
SCALE 1/8" = 1'-0"

J1 REAR ELEVATION (EAST)

SCALE 1/8" = 1'-0"

C1 RIGHT ELEVATION (SOUTH)

SCALE 1/8" = 1'-0"




C1 FRONT ELEVATION (WEST)

SCALE 1/8" = 1'-0"

| | |
|---|---|
| DARK BRONZE FINISH WALL FULL CUT-OFF LIGHT FIXTURES | |
| PRE-CAST STONE SILL, LINTEL, BAND - NATURAL | |
| STANDING SEAM CANOPY METAL ROOF, GUTTERS, DOWNSPOUTS - GREY | |
| DOORS, WINDOWS, COPING, DOWNSPOUTS - WHITE | |
| BELDEN RED BRICK #2 | |
| BELDEN RED ACCENT BRICK #1 | |
| BELDEN TUMBLEWEED VELOUR | |
| DRYVIT HONEY BEIGE #431 | |
| BORAL MOJAVE LEDGESTONE | |

A1 LEGEND

SCALE NTS

FRANCHISEE

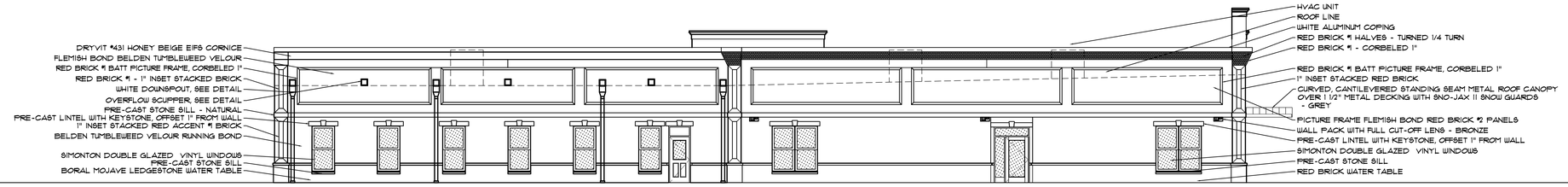
ROHIT PATEL

ELECTRONIC (AUTOCAD) FILES INCLUDING ARCHITECTURAL, STRUCTURAL, FIRE PROTECTION, HVAC, PLUMBING + ELECTRICAL WILL NOT BE MADE AVAILABLE FOR USE BY THE GENERAL CONTRACTOR OR THE GENERAL CONTRACTOR'S SUBCONTRACTORS, EXCEPT FOR THE FIRE PROTECTION CONTRACTOR WITH A PATTERN OF 4200 / SHEET.

ALL CONTRACTORS SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS. CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLETE REVIEW ITEMS AFFECTING ALL TRADES ARE PLACED THROUGHOUT THE SET OF DRAWINGS. NO EXTRAS FOR MISSED ITEMS IN OTHER SECTIONS WILL BE PERMITTED. THE CONTRACTORS SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY AMBIGUITY, INCONSISTENCY OR ERROR WHICH THEY DISCOVER UPON EXAMINATION OF THE CONTRACT DOCUMENTS, THE SITE, OR LOCAL CONDITIONS. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED ON DRAWINGS.

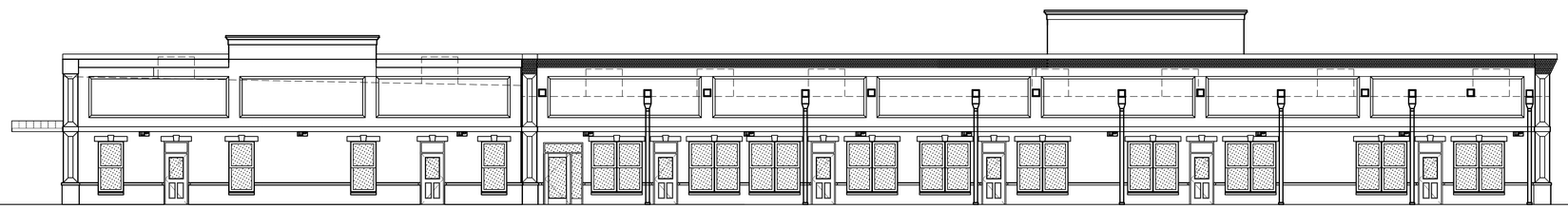
THIS DOCUMENT IS RELEASED FOR THE SOLE PURPOSE OF OWNER REVIEW OF EXISTING CONDITIONS + USE FOR INITIAL LAYOUT OF THE DESIGN UNDER THE AUTHORITY OF HAROLD C. BAKER, AIA ON THE DATE LISTED HEREIN. IT IS NOT INTENDED TO BE USED FOR CONSTRUCTION PURPOSES UNTIL PERMITS ARE ISSUED BY THE AHJ.

| REV'S/ON. ISSUE DATE | DESCRIPTION |
|---|---|
| PLANK | |
| PLANK | |
| PLANK | |



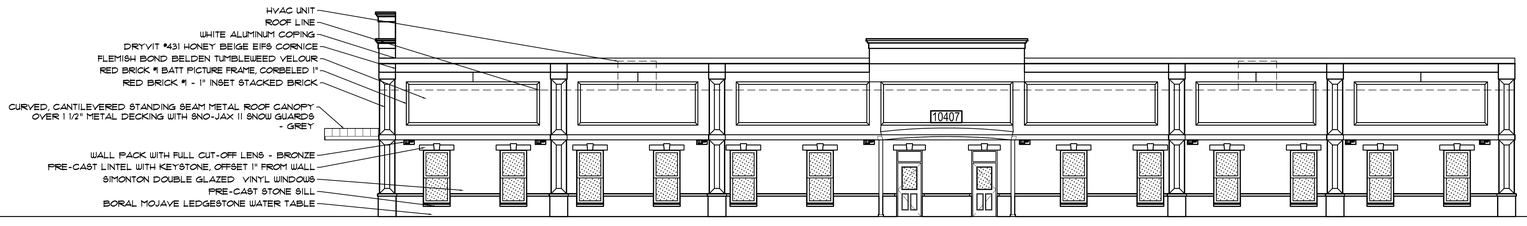

N1 LEFT SIDE ELEVATION (NORTH)

SCALE: 1/8" = 1'-0"



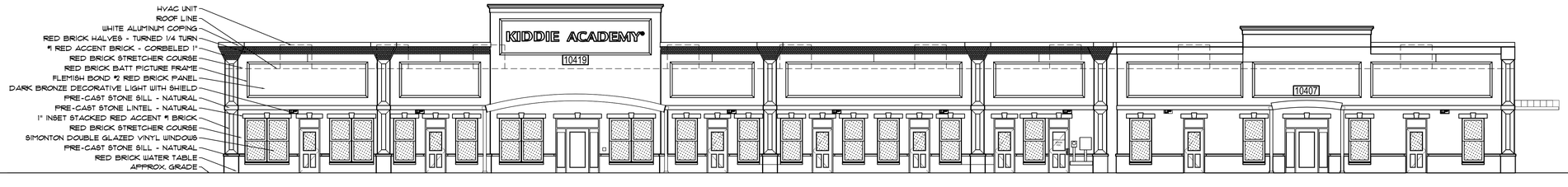
N1 REAR ELEVATION (EAST)

SCALE: 1/8" = 1'-0"




N1 RIGHT ELEVATION (SOUTH)

SCALE: 1/8" = 1'-0"




A1 FRONT ELEVATION (WEST)

SCALE: 1/8" = 1'-0"

FRANCHISEE

ROHIT PATEL

ELECTRONIC (AUTOCAD) FILES INCLUDING ARCHITECTURAL, STRUCTURAL, FIRE PROTECTION, HVAC, PLUMBING, & ELECTRICAL, WILL NOT BE MADE AVAILABLE FOR USE BY THE GENERAL CONTRACTOR OR THE GENERAL CONTRACTOR'S SUBCONTRACTORS, EXCEPT FOR THE FIRE PROTECTION CONTRACTOR WITH A PATTERN OF 4200 / SHEET.

ALL CONTRACTORS SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS. CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLETE REVISIL ITEMS AFFECTING ALL TRADES ARE PLACED THROUGHOUT THE SET OF DRAWINGS. NO "EXTRAS" FOR MISSED ITEMS IN OTHER SECTIONS WILL BE PERMITTED. THE CONTRACTORS SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY AMBIGUITY, INCONSISTENCY OR ERROR WHICH THEY DISCOVER UPON EXAMINATION OF THE CONTRACT DOCUMENTS, THE SITE, OR LOCAL CONDITIONS. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. (ZI) DRAWINGS.

THIS DOCUMENT IS RELEASED FOR THE SOLE PURPOSE OF OWNER REVIEW OF EXISTING CONDITIONS & USE FOR INITIAL LAYOUT OF THE DESIGN UNDER THE AUTHORITY OF HAROLD C. BAKER, AIA ON THE DATE LISTED HEREIN. IT IS NOT INTENDED TO BE USED FOR CONSTRUCTION PURPOSES UNTIL PERMITS ARE ISSUED BY THE AHJ.

| MARK | REVISION ISSUE DATE | DESCRIPTION |
|---|---|---|
| A | | |
| A | | |
| A | | |

ELEGANCE VERSATILITY DURABILITY SECURITY PEACE OF MIND

ALUMI-GUARD

QUALITY FENCE & RAILING PRODUCTS

# ADVANTAGE

ALL ALUMI-GUARD PRODUCTS ARE MANUFACTURED
WITH PRIDE IN THE UNITED STATES OF AMERICA

# Experience the Alumi-Guard Difference

*"One of The Top Finishing Shops in North America," for the second consecutive year!*

~ Products Finishing Magazine

## Made in the U.S.A.

Our large selection of maintenance-free fence, railing, and gates are made to withstand some of the harshest conditions. Manufactured in a state-of-the-art facility in Brooksville, Florida, Alumi-Guard products are available in all fifty states and Canada.

Everything we produce - including all panels, posts, and gates - are made right here at home. So know that when you choose an Alumi-Guard product, you're also choosing an American company that manufactures quality, American made products.

All Alumi-Guard Products are Manufactured in the United States of America

## Superior Powder Coated Strength

Platinum Certified Applicator - Surpasses 10,000 Hours Salt Spray Test

Meets or Exceeds AAMA 2604-13 Specifications

## Cutting-Edge Technology & Unmatched Service & Support

Customer Service, Engineering and Architect Services Departments

## Limited Lifetime Warranty

Alumi-Guard

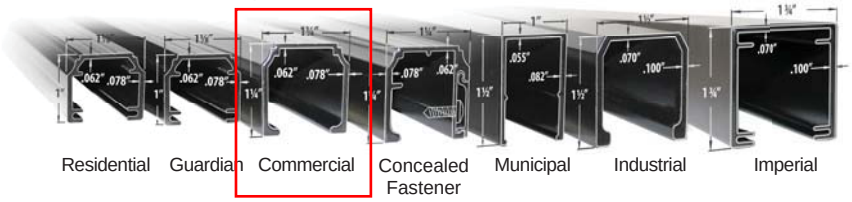
Quality Fence & Railing Products

alumi-guard.com

# The Obvious Choice...

- U-Frame Gates
- Beveled Rails for Added Strength
- Eco-Conscious Company
- Earn LEED Points
- Custom Services
- Quick Ship Program

## Seven Unique Grades




## Seven Rich Powder Coated Colors

All Colors Meet or Exceed AAMA 2604-13 Specifications

## ALUMI-GUARD ADVANTAGES: DETAILS

| | |
|---|---|
| **Made in the USA - Available Nationwide**<br>Manufactured in a state-of-the art facility located in Brooksville, FL | ✓ |
| **Axalta Platinum Certified Applicator**<br>The ONLY Fence Manufacturer to meet the stringent requirements | ✓ |
| **Superior Powder Coated Strength**<br>Withstands the harshest of conditions<br>Surpasses 10,000 hours Salt Spray Test (ASTM B-117)<br>Meets or Exceeds AAMA 2604-13 Specifications | ✓ |
| **Exemplary Service**<br>Professional Engineering, Architect, and Customer Service Departments | ✓ |
| **UL-325 Compliant Gates Available** | ✓ |
| **100% Welded U-Frame Gates** | ✓ |
| **Beveled Rails for Added Strength** | ✓ |
| **True Height Panels & Posts** | ✓ |
| **Long Product Lifecycle**<br>Durable, scratch resistant powder coating, maintenance free,<br>80% recycled Aluminum - doesn't rust like steel | ✓ |
| **Seven Rich Powder Coated Colors**<br>Standard Colors meet or exceed AAMA 2604-13 Specifications<br>Custom colors available | ✓ |
| **Select Sizes Meet ICC Pool Code Specifications** | ✓ |
| **Eco-Conscious Environmentally Aware Company**<br>100% Aluminum, Paper & Plastic Scrap is recycled<br>90% Evaporant coolant water recycled<br>Less than 1% of powder waste annually<br>Lean Manufacturing Facility Practices | ✓ |
| **Earn LEED Points (V3)**<br>Construction Waste Mgmt, Recycled Content, Innovation in Design | ✓ |
| **Strong and Durable Boerboel® Hardware**<br>Multiple options are available for all gates | ✓ |
| **Custom Services Available** | ✓ |
| **Quick Ship Program** | ✓ |

## Table of Contents


| | |
|---|---|
| The Alumi-Guard Difference | 2 |
| The Obvious Choice - Advantages | 3 |
| Flat Top | 4 |
| Pressed Spear | 5 |
| Premier | 6 |
| Enhancements (Radius, Arbor, Custom) | 7 |
| Pedestrian Gates (Walk & Pool) | 8 |
| Estate Gates (Swing & Cantilever) | 9 |
| Security | 10 |
| Chain Link Cantilever | 11 |
| Guardrail | 12 |
| Handrail | 13 |
| Fortress | 14 |
| Chariot | 15 |


Please contact us for additional information regarding our powder coating, sealed drawings and load capacities. We're also available for assistance with job specific drawings or custom specifications. If you have questions regarding fencing, gates, balcony style guardrail or ADA handrail, we would be happy to help guide you to the right product for your job.


**Alumi-Guard**
2401 Corporate Blvd · Brooksville, FL 34604
Toll Free: (877) 258-6448 · Office (352) 754-8555
Fax (352) 544-8442

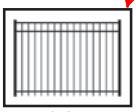
4' high @ interior or playground & @ sides & front of building

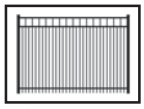
ASCOT 3-CHANNEL

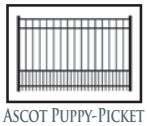
# FLAT TOP

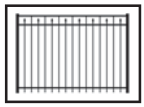
## Styles

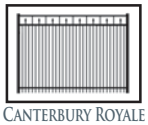
Ascot 2-Channel

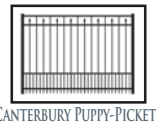

Ascot 3-Channel


Ascot Royale


Ascot Puppy-Picket


Canterbury


Canterbury Royale


Canterbury Puppy-Picket

Fairmount

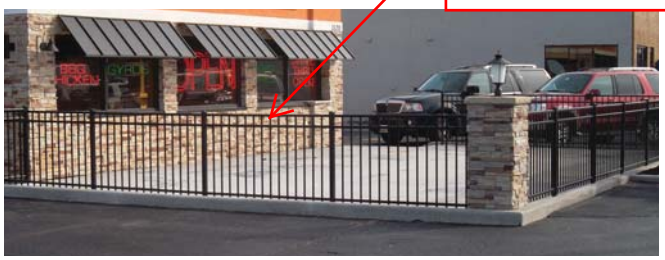
## Ascot · Canterbury Fairmount

## ADVANTAGES:

- Classic and Versatile
- Decorative
- Property Boundary
- Safety Barrier
- 7 Unique Grades
- 7 Rich Colors
- U-Frame Gates
- Beveled Rails For Strength
- True Height Panels & Posts

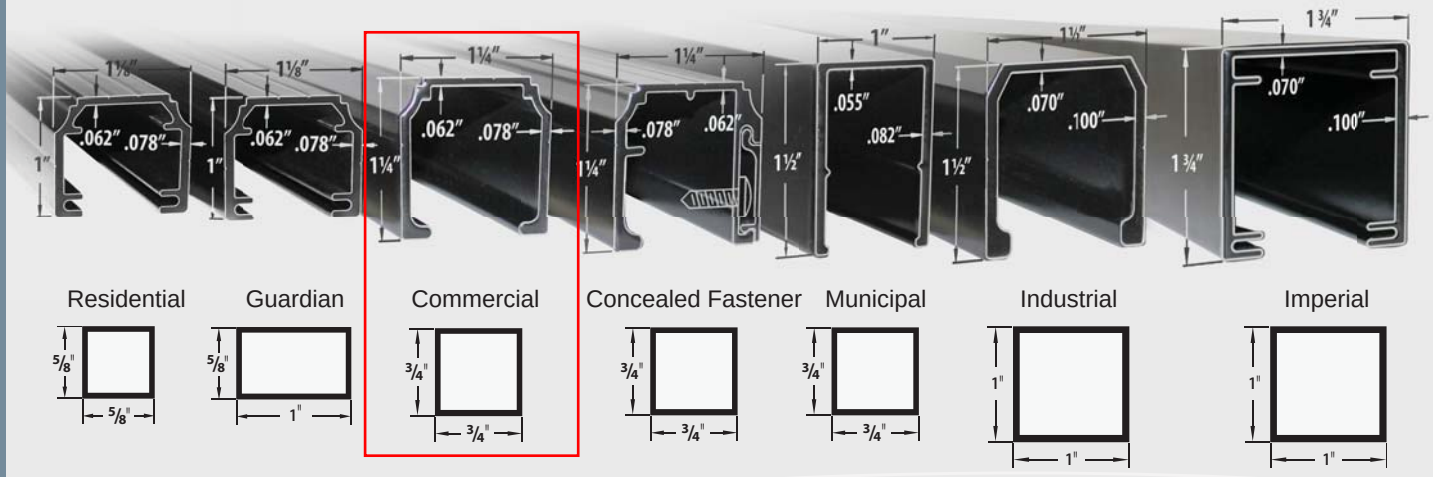
5' high perimeter of playground

ASCOT 3-CHANNEL



ASCOT 3-CHANNEL

## Grades: Channels & Pickets




~ Channels & Pickets are shown at 3/5 actual size

ELEGANCE VERSATILITY DURABILITY SECURITY PEACE OF MIND

www.Alumi-Guard.com

BUILT BY Barrette

*Industrial Grade • Belmont*
*Four Channel • White*

*Made in the USA*


Alumi-Guard

Office: (352) 754-8555
Toll Free: (877) 258-6448
Fax: (352) 544-8442


Florida ASLA — American Society of Landscape Architects, Florida Chapter

AFA — *Member of the American Fence Association*

CSI Member — The Construction Specifications Institute

NAFCA — North American Fence Contractors Association


2401 Corporate Blvd Brooksville, FL 34604 • Network: Nationwide



© 2017, Barrette Outdoor Living

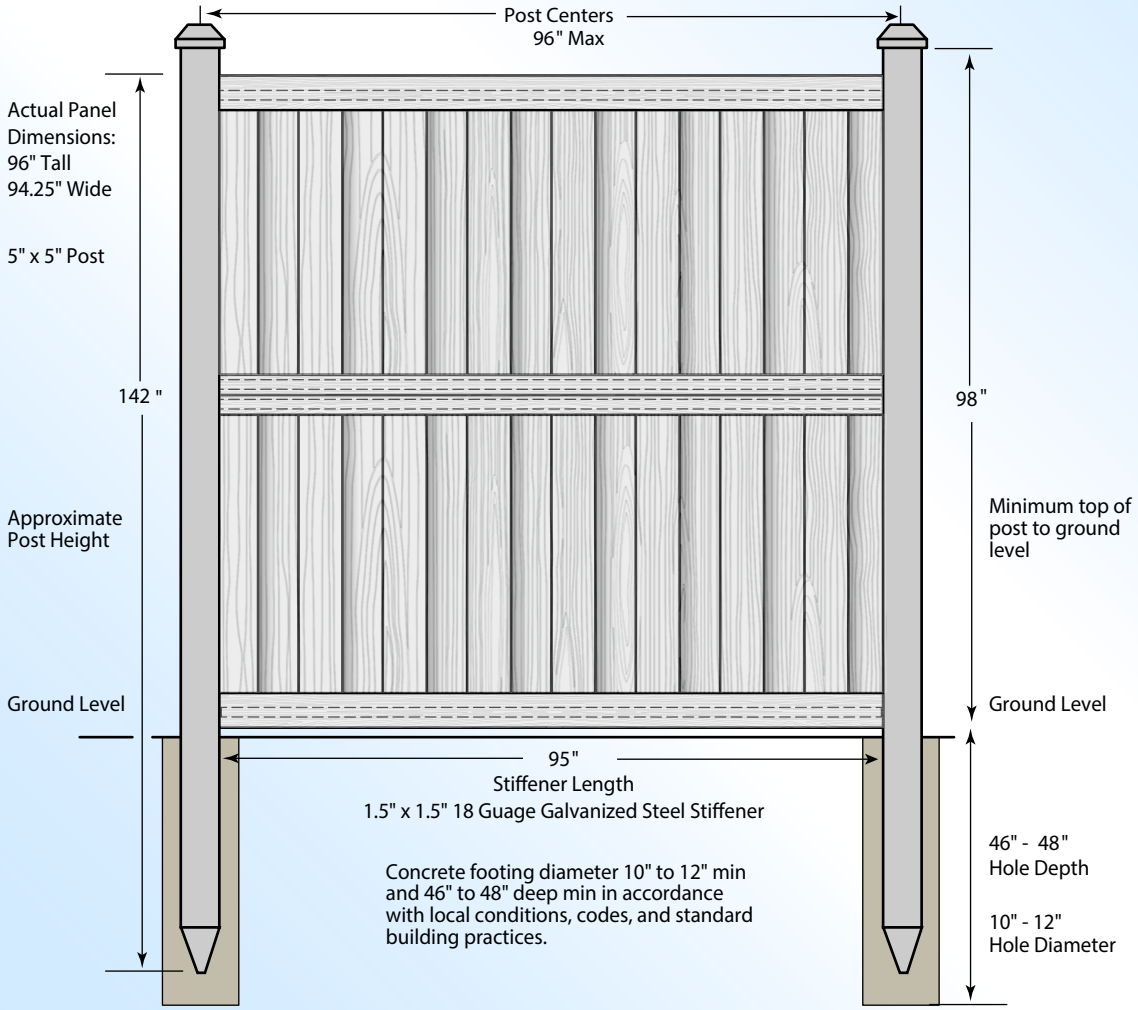
Purchase Factory Direct 24/7 - Heavy Duty Vinyl Fence & Decking
Your Trusted Manufacturer & Supplier Since 1995!

**Phone: (507) 206-4154 - Website: www.vinylfenceanddeck.com**

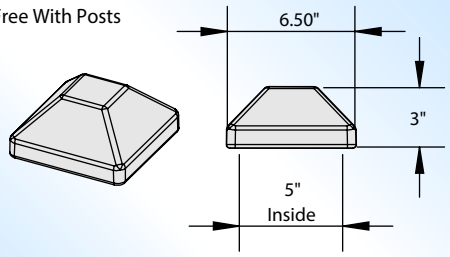
VINYL FENCE WHOLESALER

# Technical Specifications - Ashland Privacy Fence

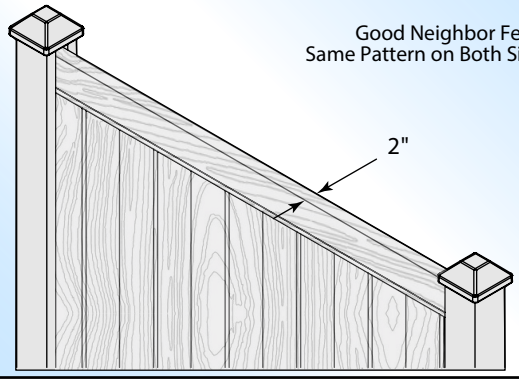
8' Tall x 8' Wide Sections




Post Cap Details
Caps Incuded Free With Posts



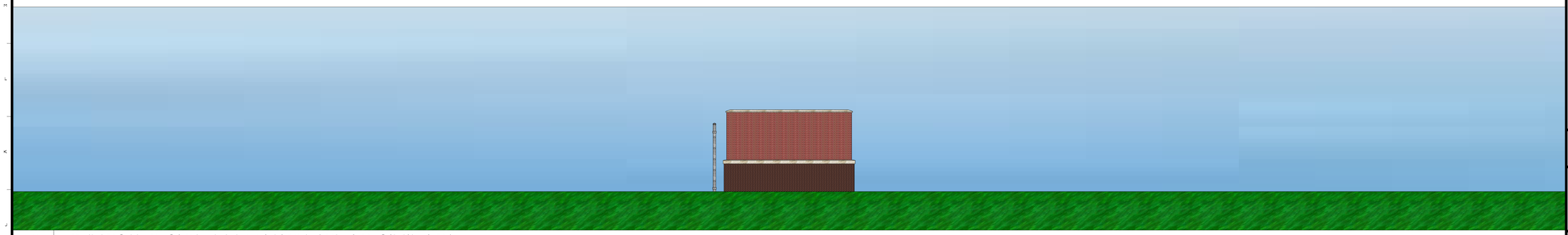

© 2018, Vinyl Fence Wholesaler, All Rights Reserved
Phone: (507) 206-4154 - Website: www.vinylfenceanddeck.com




| | | |
|---|---|---|
| Model #:WP96X96 | This drawing may not be altered or reproduced without the permission of Vinyl Fence Wholesaler | |
| Date: May 1, 2015 | Scale: not to scale | REV: A Gleason |
| Sheet 1 of 1 | U.S. Patents: 7,478,797 / 7,635,114 Foreign Patents Pending | |

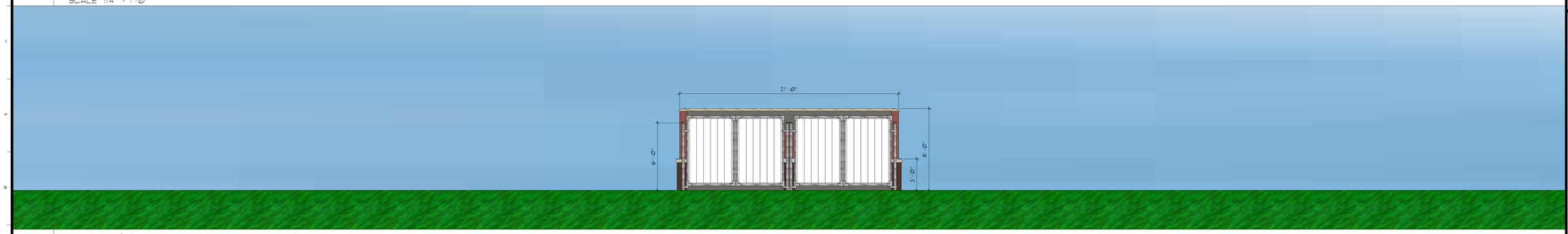
VINYL FENCE WHOLESALER
www.vinylfenceanddeck.com

Website: www.vinylfenceanddeck.com
Phone: (507) 206-4154



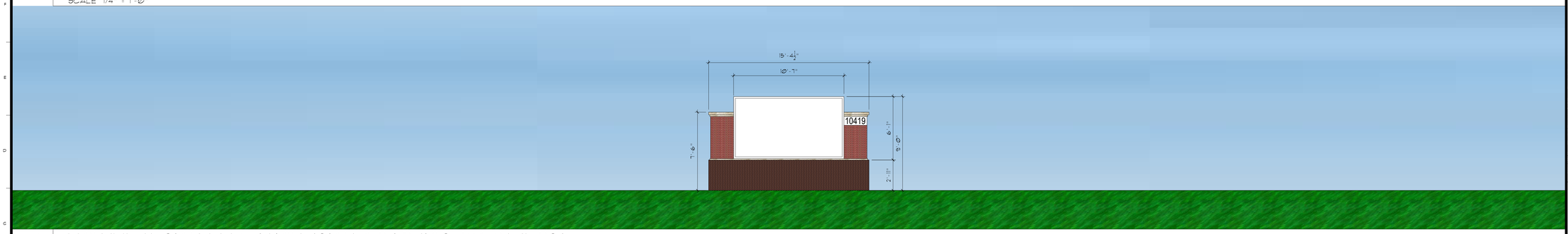
J1 DUMPSTER SIDE ELEVATION (REAR SIMILAR)

SCALE 1/4" = 1'-0"




F1 DUMPSTER FRONT ELEVATION

SCALE 1/4" = 1'-0"




C1 MONUMENT SIGN ELEVATION (SIGN GRAPHICS BY OTHERS)

SCALE 1/4" = 1'-0"

DARK BRONZE FINISH WALL FULL CUT-OFF LIGHT FIXTURES

PRE-CAST STONE SILL, LINTEL, BAND - NATURAL

STANDING SEAM CANOPY METAL ROOF, GUTTERS, DOWNSPOUTS - GREY

DOORS, WINDOWS, COPING, DOWNSPOUTS - WHITE

BELDEN RED BRICK #2

BELDEN RED ACCENT BRICK #1

BELDEN TUMBLEWEED VELOUR

DRYVIT HONEY BEIGE #431

BORAL MOJAVE LEDGESTONE

A1 LEGEND

SCALE NTS

FRANCHISEE

ROHIT PATEL

ELECTRONIC (AUTOCAD) FILES INCLUDING ARCHITECTURAL, STRUCTURAL, FIRE PROTECTION, HVAC, PLUMBING, & ELECTRICAL WILL NOT BE MADE AVAILABLE FOR USE BY THE GENERAL CONTRACTOR OR THE GENERAL CONTRACTOR'S SUBCONTRACTORS, EXCEPT FOR THE FIRE PROTECTION CONTRACTOR WITH A PAYMENT OF 4000 / SHEET.

ALL CONTRACTORS SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS. CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLETE REVIEW. ITEMS AFFECTING ALL TRADES ARE PLACED THROUGHOUT THE SET OF DRAWINGS. NO EXTRAS FOR MISSED ITEMS IN OTHER SECTIONS WILL BE PERMITTED. THE CONTRACTORS SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY AMBIGUITY, INCONSISTENCY OR ERROR WHICH THEY DISCOVER UPON EXAMINATION OF THE CONTRACT DOCUMENTS, THE SITE, OR LOCAL CONDITIONS. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED ON DRAWINGS.

THIS DOCUMENT IS RELEASED FOR THE SOLE PURPOSE OF OWNER REVIEW OF EXISTING CONDITIONS & USE FOR INITIAL LAYOUT OF THE DESIGN UNDER THE AUTHORITY OF HAROLD C. BAKER, AIA ON THE DATE LISTED HEREIN. IT IS NOT INTENDED TO BE USED FOR CONSTRUCTION PURPOSES UNTIL PERMITS ARE ISSUED BY THE AHJ.

| MARK | REVISION ISSUE DATE | DESCRIPTION |
|---|---|---|
| A1 | | |
| A2 | | |
| A3 | | |
| A4 | | |
| A5 | | |
| A6 | | |
| A7 | | |

| MARK | ADDENDUM ISSUE DATE | DESCRIPTION |
|---|---|---|
| A1 | | |
| A2 | | |

All drawings and written material appearing herein constitute original and unpublished work of the architect and may not be duplicated, used or disclosed without written consent of the architect. © 2017 Harold C. Baker AIA

- ☐ PERMITTING
- ☐ BIDDING
- ☐ CONSTRUCTION
- ☐ RECORD

- 03.20.19 ■ PRELIMINARY SITE & FLOOR PLAN
- 05.24.19 ■ PRELIMINARY RENDERING
- 07.26.19 ■ RENDERING
- ☐ OWNER K.A. REVIEW
- ☐ OWNER K.A. REV/EW
- ☐ K.A. & OWNER REVIEW
- ☐ K.A. & OWNER REVIEW 100%

KIDDIE ACADEMY™

EDUCATIONAL CHILD CARE

10419 CALUMET AVENUE

MUNSTER, LAKE COUNTY, IN 46321

HAROLD C. BAKER, AIA

A R C H I T E C T S

613 High Street, Ste 104, Worthington OH 43085 614.436.0955

email: baker@bakerarchitects.com

HAROLD C. BAKER REGISTERED NO. AR0060067 STATE OF INDIANA ARCHITECT

DATE SIGNED: 07.26.19
EXPIRY DATE: 12.31.19

| | |
|---|---|
| Drawn By: | CAD |
| Checked By: | HCB |
| Project Number: | 1119 |
| Scale: | AS NOTED |

A201

MONUMENT SIGN & DUMPSTER RENDERING

# Lumark

## DESCRIPTION

The Prevail LED area, site luminaire combines optical performance, energy efficiency and long term reliability in an advanced, patent pending modern design. Utilizing the latest LED technology, the Prevail luminaire delivers unparalleled uniformity resulting in greater pole spacing. A versatile mount standard arm facilitates ease of installation for both retrofit and new installations. With energy savings greater than 85%, the Prevail fixture replaces 150-1,000W metal halide fixtures in general area lighting applications such as parking lots, walkways, roadways and building areas.

| | | |
|---|---|---|
| **Catalog #** | | **Type** |
| **Project** | | |
| **Comments** | | **Date** |
| **Prepared by** | | |

## SPECIFICATION FEATURES

### Construction
Construction is comprised of a heavy-duty, single-piece die-cast aluminum housing. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. The die-cast aluminum door is tethered to provide easy access to the driver if replacement is required. A one-piece silicone gasket seals the door to the fixture housing. The optics is mounted on a versatile, aluminum plate that dissipates heat from the LEDs resulting in longer life of the fixture. The fixture is IP66 and vibration rated (ANSI C136.31) to insure strength of construction and longevity in the selected application.

### Optics
Precision molded, high efficiency optics are precisely designed to shape the distribution, maximizing efficiency and application spacing. Available in Type II, III, IV and V distributions with lumen packages ranging from 6,100 to 18,900 nominal lumens. Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life. For the ultimate level of spill light control, an optional house side shield accessory can be field or factory installed.

### Electrical
LED drivers are mounted to the fixture for optimal heat sinking and ease of maintenance. Class 1 electronic drivers have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Available in 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. 10kV/10 kA surge protection standard. 0-10V dimming driver is standard with leads external to the fixture. Suitable for ambient temperatures from -40°C to 40°C. Optional 50°C HA (high ambient) available. Standard NEMA 3-PIN twistlock photocontrol receptacle and NEMA 7-PIN twistlock photocontrol receptacles are available as options.

### Controls
See Control Options section for more details on available offerings.

### Mounting
Standard pole mount arm is bolted directly to the pole and the fixture slides onto the arm and locks in place with a bolt facilitating quick and easy installation. The versatile, patented, standard mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the standard mounting arm enables wiring of the fixture without having to access the driver compartment. A knock-out on the standard mounting arm enables round pole mounting. Wall mount and mast arm mounting options are available. Mast arm adapter fits 2-3/8" O.D. tenon.

### Finish
Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is bronze. Additional colors available in white, grey, black, dark platinum and graphite metallic.

### Warranty
Five-year warranty.

# PRV / PRV-XL
## PREVAIL

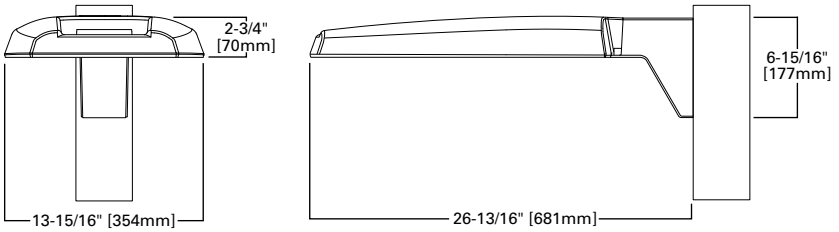
**LED**

**AREA / SITE / ROADWAY LUMINAIRE**

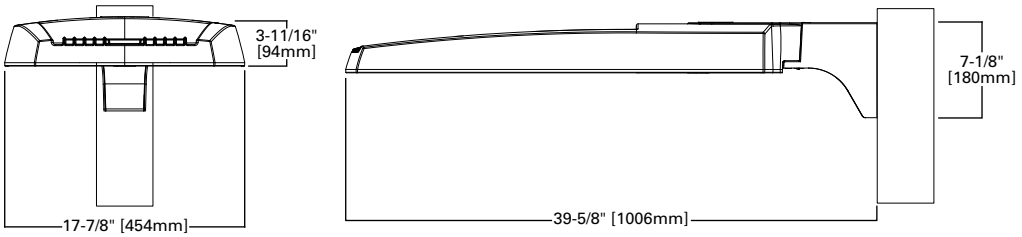
LumenSafe Technology
CLICK HERE

## DIMENSIONS

**Prevail**




**Prevail XL**

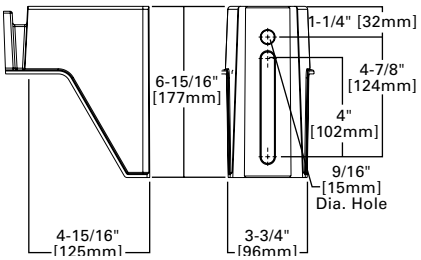



## CERTIFICATION DATA
UL and cUL Wet Location Listed
IP66-Rated
3G Vibration Rated (PRV)
1.5G Vibration Rated (PRV-XL)
ISO 9001
FCC Class A

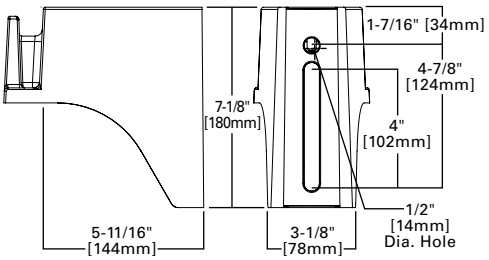
## ENERGY DATA
**Electronic LED Driver**
0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 and 60Hz,
347V/60Hz, 480V/60Hz
-40°C Minimum Temperature Rating
+40°C Ambient Temperature Rating

## SHIPPING DATA
**Approximate Net Weight:**
**PRV:** 20 lbs. (9.09 kgs.)
**PRV-XL:** 45 lbs. (20.41 kgs.)

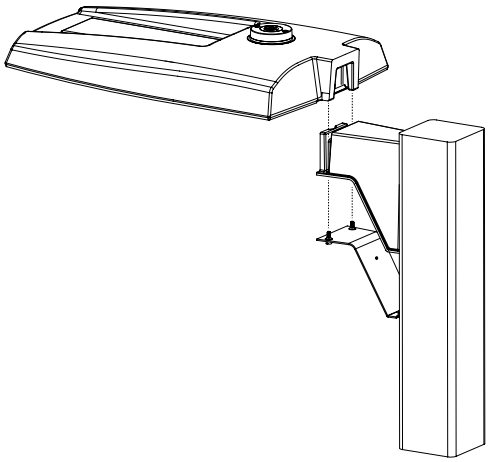
## POLE MOUNT ARM (PRV)



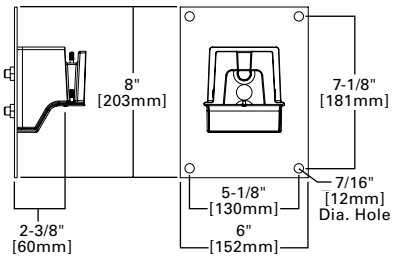

## POLE MOUNT ARM (PRV-XL)



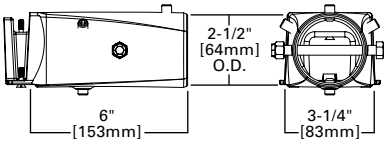

## VERSATILE MOUNT SYSTEM



## WALL MOUNT (PRV)




## MAST ARM MOUNT (PRV)




## MOUNTING CONFIGURATIONS AND EPAS

**Wall Mount**

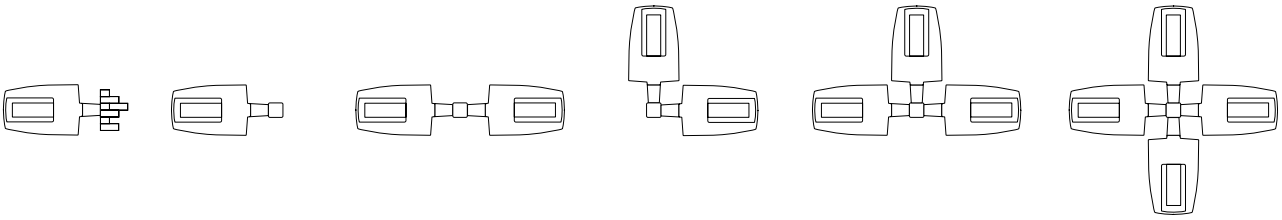
**Arm Mount Single**
EPA 0.75 (PRV)
EPA 1.12 (PRV-XL)

**Arm Mount 2 @ 180°**
EPA 1.50 (PRV)
EPA 2.25 (PRV-XL)

**Arm Mount 2 @ 90°**
EPA 1.50 (PRV)
EPA 2.13 (PRV-XL)

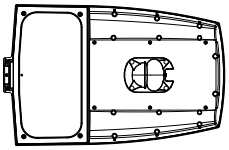
**Arm Mount 3 @ 90°**
EPA 2.25 (PRV)
EPA 2.52 (PRV-XL)

**Arm Mount 4 @ 90°**
EPA 3.00 (PRV)
EPA 2.52 (PRV-XL)

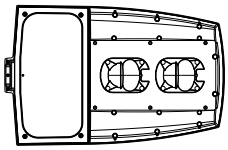


## OPTICAL CONFIGURATIONS

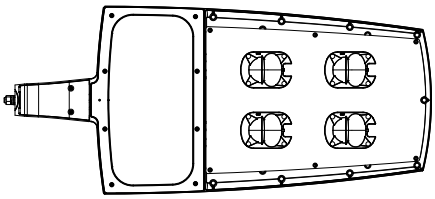
**PRV-C15**
(7,100 Nominal Lumens)



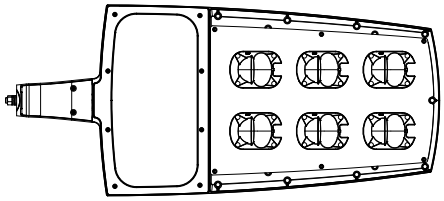
**PRV-C25/C40/C60**
(13,100/17,100/20,000 Nominal Lumens)



**PRV-XL-C75/C100/C125**
(26,100/31,000/36,300 Nominal Lumens)



**PRV-XL-C150/C175**
(41,100/48,600 Nominal Lumens)



## POWER AND LUMENS (PRV)

| **Light Engine** | | **C15** | **C25** | **C40** | **C60** |
|---|---|---|---|---|---|
| **Power** (Watts) | | 52 | 96 | 131 | 153 |
| **Input Current @ 120V** (A) | | 0.43 | 0.80 | 1.09 | 1.32 |
| **Input Current @ 277V** (A) | | 0.19 | 0.35 | 0.48 | 0.57 |
| **Input Current @ 347V** (A) | | 0.17 | 0.30 | 0.41 | 0.48 |
| **Input Current @ 487V** (A) | | 0.12 | 0.22 | 0.30 | 0.35 |
| **Distribution** | | | | | |
| **Type II** | 4000K Lumens | 7,123 | 13,205 | 17,172 | 20,083 |
| | BUG Rating | B2-U0-G2 | B2-U0-G2 | B3-U0-G3 | B3-U0-G3 |
| | 3000K Lumens | 6,994 | 12,965 | 16,860 | 19,718 |
| **Type III** | 4000K Lumens | 7,111 | 13,183 | 17,144 | 20,050 |
| | BUG Rating | B1-U0-G2 | B2-U0-G3 | B3-U0-G4 | B3-U0-G4 |
| | 3000K Lumens | 6,982 | 12,944 | 16,832 | 19,686 |
| **Type IV** | 4000K Lumens | 7,088 | 13,140 | 17,087 | 19,984 |
| | BUG Rating | B1-U0-G3 | B2-U0-G4 | B2-U0-G4 | B3-U0-G5 |
| | 3000K Lumens | 6,959 | 12,901 | 16,777 | 19,621 |
| **Type V** | 4000K Lumens | 7,576 | 14,045 | 18,264 | 21,360 |
| | BUG Rating | B3-U0-G3 | B4-U0-G3 | B4-U0-G4 | B5-U0-G4 |
| | 3000K Lumens | 7,438 | 13,790 | 17,932 | 20,972 |

## POWER AND LUMENS (PRV-XL)

| **Light Engine** | | **C75** | **C100** | **C125** | **C150** | **C175** |
|---|---|---|---|---|---|---|
| **Power** (Watts) | | 176 | 217 | 264 | 285 | 346 |
| **Input Current @ 120V** (A) | | 1.50 | 1.84 | 2.21 | 2.38 | 2.92 |
| **Input Current @ 277V** (A) | | 0.66 | 0.82 | 0.97 | 1.04 | 1.25 |
| **Input Current @ 347V** (A) | | 0.54 | 0.66 | 0.79 | 0.84 | 1.02 |
| **Input Current @ 487V** (A) | | 0.40 | 0.48 | 0.57 | 0.62 | 0.74 |
| **Distribution** | | | | | | |
| **Type II** | 4000K Lumens | 26,263 | 31,231 | 36,503 | 41,349 | 48,876 |
| | BUG Rating | B3-U0-G3 | B3-U0-G4 | B4-U0-G4 | B4-U0-G4 | B4-U0-G5 |
| | 3000K Lumens | 25,786 | 30,664 | 35,840 | 40,598 | 47,989 |
| **Type III** | 4000K Lumens | 26,120 | 31,061 | 36,304 | 41,124 | 48,610 |
| | BUG Rating | B3-U0-G5 | B3-U0-G5 | B3-U0-G5 | B4-U0-G5 | B4-U0-G5 |
| | 3000K Lumens | 25,646 | 30,497 | 35,645 | 40,377 | 47,727 |
| **Type IV** | 4000K Lumens | 26,098 | 31,035 | 36,274 | 41,089 | 48,569 |
| | BUG Rating | B3-U0-G5 | B3-U0-G5 | B3-U0-G5 | B3-U0-G5 | B4-U0-G5 |
| | 3000K Lumens | 25,624 | 30,471 | 35,615 | 40,343 | 47,687 |
| **Type V** | 4000K Lumens | 28,129 | 33,450 | 39,097 | 44,287 | 52,349 |
| | BUG Rating | B5-U0-G5 | B5-U0-G5 | B5-U0-G5 | B5-U0-G5 | B5-U0-G5 |
| | 3000K Lumens | 27,618 | 32,843 | 38,387 | 43,483 | 51,398 |

## LUMEN MAINTENANCE

| **Configuration** | **TM-21 Lumen Maintenance (50,000 Hours)** | **Theoretical L70 (Hours)** |
|---|---|---|
| Up to PRV-C60 at 25°C | 91.30% | 194,000 |
| Up to PRV-C60 at 40°C | 87.59% | 134,000 |
| Up to PRV-XL-C175 at 25°C | 91.40% | 204,000 |
| Up to PRV-XL-C175 at 40°C | 89.41% | 158,000 |

## LUMEN MULTIPLIER

| **Ambient Temperature** | **Lumen Multiplier** |
|---|---|
| **10°C** | 1.02 |
| **15°C** | 1.01 |
| **25°C** | 1.00 |
| **40°C** | 0.99 |

## CONTROL OPTIONS

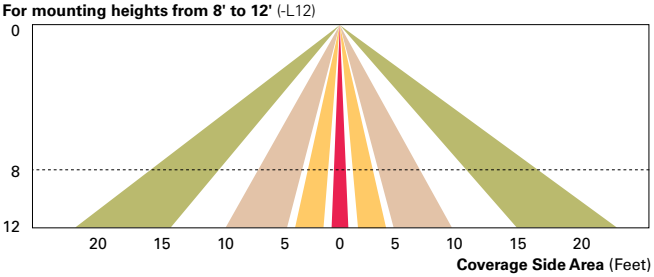
**0-10V** (D) The dimming option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

**Photocontrol** (PER and PER7) Photocontrol receptacles provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

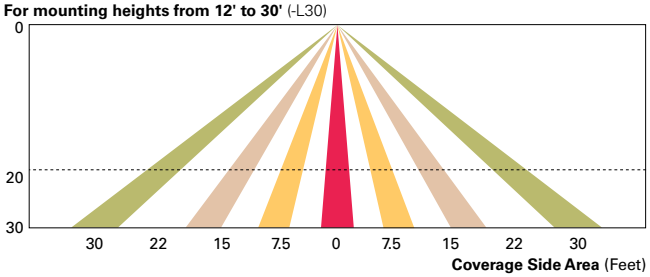
**Dimming Occupancy Sensor** (MSP and MS) These sensors are factory installed in the luminaire housing. When a sensor for dimming operation (/DIM) option is selected, the luminaire will dim down to approximately 50 percent power after five minutes of no activity detected. When activity is detected, the luminaire returns to full light output. When a sensor for ON/OFF operation is selected, the luminaire will turn off after five minutes of no activity.

These occupancy sensors include an integral photocell that can be activated or inactivated with the programming remote / configuration tool for "dusk-to-dawn" control or "daylight harvesting". Note: For MSP sensors, the factory preset is ON (Enabled), and for MS sensors, the factory preset is OFF (Disabled). The programming remote / tool is a wireless tool that can be utilized to change the dimming level, time delay, sensitivity and other parameters. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 8'-40'.

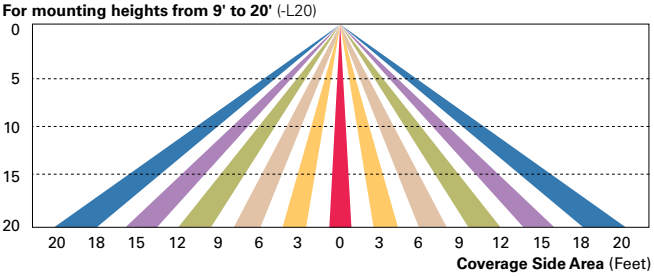
**For mounting heights from 8' to 12'** (-L12)



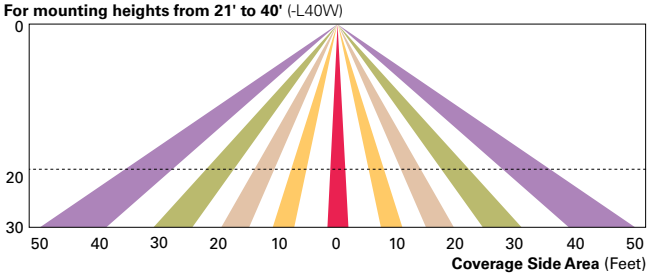

**For mounting heights from 12' to 30'** (-L30)




**For mounting heights from 9' to 20'** (-L20)




**For mounting heights from 21' to 40'** (-L40W)

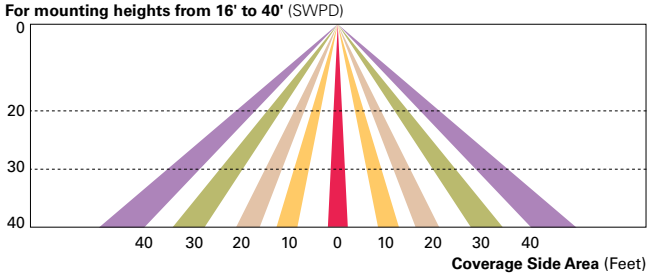



**WaveLinx Wireless Control and Monitoring System** Available in 7-PIN or 4-PIN configurations, the WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. Use the WaveLinx Mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

*WaveLinx Outdoor Control Module (WOLC-7P-10A)* A photocontrol that enables astronomic or time-based schedules to provide ON, OFF and dimming control of fixtures utilizing a 7-PIN receptacle. The out-of-box functionality is ON at dusk and OFF at dawn.

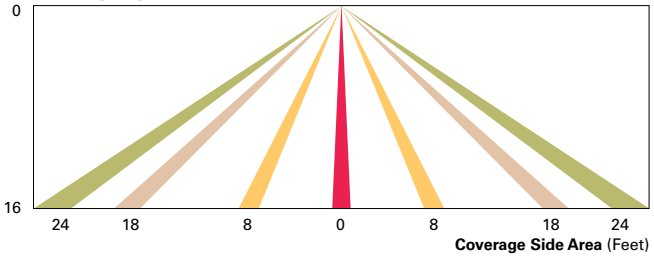
*WaveLinx Wireless Sensor (SWPD4 and SWPD5)* These outdoor sensors offer passive infrared (PIR) occupancy and a photocell for closed loop daylight sensing. These sensors can be factory installed or field-installed via simple, tool-less integration into luminaires equipped with the Zhaga Book 18 compliant 4-PIN receptacle (ZW). These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or daylight harvesting that is factory-enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.

**For mounting heights from 16' to 40'** (SWPD)

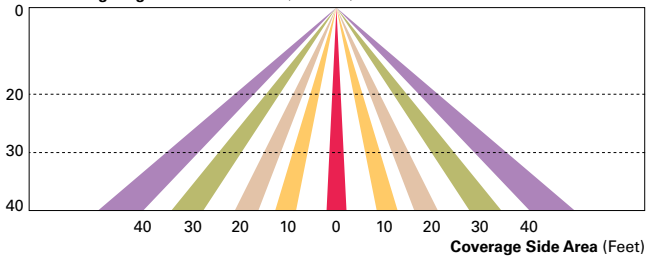



**LumaWatt Pro Wireless Control and Monitoring System** (LWR-LW and LWR-LN) The Eaton's LumaWatt Pro powered by Enlighted is a connected lighting solution that combines LED luminaires with an integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of other resources beyond lighting.

**For mounting heights from 8' to 16'** (LWR-LW)




**For mounting heights from 16' to 40'** (LWR-LN)




**LumenSafe Integrated Network Security Camera** (LD) The LumenSafe integrated network camera is a streamlined, outdoor-ready camera that provides high definition video surveillance. This IP camera solution is optimally designed to integrate into virtually any video management system or security software platform of choice. No additional wiring is needed beyond providing line power to the luminaire. LumenSafe features factory-installed power and networking gear in a variety of networking options allowing security integrators to design the optimal solution for active surveillance.

## ORDERING INFORMATION

**Sample Number**: PRV-XL-C75-D-UNV-T4-SA-BZ

| Product Family [1] | Light Engine [2] | Driver | Voltage | Distribution | Mounting | Color |
|---|---|---|---|---|---|---|
| **PRV**=Prevail | **C15**=(1 LED) 7,100 Nominal Lumens<br>**C25**=(2 LEDs) 13,100 Nominal Lumens<br>**C40**=(2 LEDs) 17,100 Nominal Lumens<br>**C60**=(2 LEDs) 20,000 Nominal Lumens | **D**=Dimming (0-10V) | **UNV**=Universal (120-277V)<br>**347**=347V<br>**480**=480V [3] | **T2**=Type II<br>**T3**=Type III<br>**T4**=Type IV<br>**T5**=Type V | **SA**=Standard Versatile Arm<br>**MA**=Mast Arm [4]<br>**WM**=Wall Mount Arm [4] | **AP**=Grey<br>**BZ**=Bronze (Standard)<br>**BK**=Black<br>**DP**=Dark Platinum<br>**GM**=Graphite Metallic<br>**WH**=White |
| **PRV-XL**=Prevail XL | **C75**=(4 LED) 26,100 Nominal Lumens<br>**C100**=(4 LED) 31,000 Nominal Lumens<br>**C125**=(4 LED) 36,000 Nominal Lumens<br>**C150**=(6 LED) 41,100 Nominal Lumens<br>**C175**=(6 LED) 48,600 Nominal Lumens | | | | | |

| **Options** (Add as Suffix) | **Accessories** (Order Separately) [15] |
|---|---|
| **7030**=70 CRI / 3000K CCT [5]<br>**7050**=70 CRI / 5000K CCT [5]<br>**HSS**=House Side Shield [6]<br>**L90**=Optics Rotated 90° Left<br>**R90**=Optics Rotated 90° Right<br>**10K**=10kV/10kA UL 1449 Fused Surge Protective Device<br>**HA**=50°C High Ambient Temperature [7]<br>**PER**=NEMA 3-PIN Twistlock Photocontrol Receptacle<br>**PER7**=NEMA 7-PIN Twistlock Photocontrol Receptacle<br>**MSP/DIM-L12**= Integrated Sensor for Dimming Operation, 8' - 12' Mounting Height [4, 8]<br>**MSP/DIM-L30**= Integrated Sensor for Dimming Operation, 12' - 30' Mounting Height [4, 8]<br>**MSP-L12**= Integrated Sensor ON/OFF Operation, 8' - 12' Mounting Height [4, 8]<br>**MSP-L30**=Integrated Sensor ON/OFF Dimming Operation, 12' - 30' Mounting Height [4, 8]<br>**MS/DIM-L20**=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [8, 9]<br>**MS/DIM-L40W**=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [8, 9]<br>**MS-L20**=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [8, 9]<br>**MS-L40W**=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [8, 9]<br>**ZW**=Wavelinx-enabled 4-PIN Twistlock Receptacle [8, 10, 11]<br>**ZW-SWPD4WH**=Wavelinx Wireless Sensor, 7' - 15' Mounting Height, White [8, 10, 11]<br>**ZW-SWPD4BZ**= Wavelinx Wireless Sensor, 7' - 15' Mounting Height, Bronze [8, 10, 11]<br>**ZW-SWPD5WH**=Wavelinx Wireless Sensor, 15' - 40' Mounting Height, White [8, 10, 11]<br>**ZW-SWPD5BZ**=Wavelinx Wireless Sensor, 15' - 40' Mounting Height, Bronze [8, 10, 11]<br>**LWR-LW**=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [8, 12]<br>**LWR-LN**=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [8, 12]<br>**(See Table Below)**= LumenSafe Integrated Network Security Camera [13, 14] | **PRVWM-XX**=Wall Mount Kit [4]<br>**PRVMA-XX**=Mast Arm Mounting Kit [4]<br>**PRVSA-XX**=Standard Arm Mounting Kit [4]<br>**PRVXLSA-XX**=Standard Arm Mounting Kit (for Prevail XL) [13]<br>**MA1010-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon<br>**MA1011-XX**=2@180° Tenon Adapter for 3-1/2" O.D. Tenon<br>**MA1017-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon<br>**MA1018-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon<br>**HS/VERD**=House Side Shield [6]<br>**VGS-F/B**=Vertical Glare Shield, Front/Back [6]<br>**VGS-SIDE**=Vertical Glare Shield, Side [6]<br>**OA/RA1013**=Photocontrol Shorting Cap<br>**OA/RA1014**=NEMA Photocontrol - 120V<br>**OA/RA1016**=NEMA Photocontrol - Multi-Tap 105-285V<br>**OA/RA1201**=NEMA Photocontrol - 347V<br>**OA/RA1027**=NEMA Photocontrol - 480V<br>**ISHH-01**=Integrated Sensor Programming Remote [16]<br>**FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [17]<br>**SWPD4-WH**=WaveLinx Wireless Sensor, 7' - 15' Mounting Height, White [11, 18]<br>**SWPD4-BZ**=WaveLinx Wireless Sensor, 7' - 15' Mounting Height, Bronze [11, 18]<br>**SWPD5-WH**=WaveLinx Wireless Sensor, 15' - 40' Mounting Height, White [11, 18]<br>**SWPD5-BZ**=WaveLinx Wireless Sensor, 15' - 40' Mounting Height, Bronze [11, 18]<br>**WOLC-7P-10A**=WaveLinx Outdoor Control Module (7-PIN) [19] |

**NOTES**:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for applications. Refer to installation instructions and pole white paper WP513001EN for additional support information.
2. Standard 4000K CCT and 70CRI.
3. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
4. Only available in PRV configurations C15, C25, C40 or C60.
5. Use dedicated IES files on product website for non-standard CCTs.
6. Option will come factory-installed. Must order one per optic/LED when ordering as a field-installable accessory (1, 2, 4, or 6). House Side Shield not suitable with T5 distribution or C60 lumen package.
7. Not available with C60 lumen package.
8. Controls system is not available with photocontrol receptacle (PER or PER7) or other controls systems (MS, MSP, ZW or LWR).
9. Utilizes the Wattstopper sensor FSP-211.
10. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F).
11. In order for the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
12. LumaWatt Pro wireless sensors are factory installed and require network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See website for LumaWatt Pro application information.
13. Only available in PRV-XL configurations C75, C100, C125, C150, or C175.
14. Not available with 347V, 480V, or HA options. Consult LumenSafe system product pages for additional details and compatability information.
15. Replace XX with paint color.
16. This tool enables adjustment to Integrated Sensor (MSP) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
17. This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
18. Requires Wavelinx-enabled 4-PIN twistlock receptacle (ZW) option.
19. Requires 7-PIN NEMA twistlock photocontrol receptacle (PER7) option. The WOLC-7 cannot be used in conjunction with other controls systems (MS, MSP, ZW or LWR).

**LumenSafe Integrated Network Security Camera Technology Options** (Add as Suffix)

| Product Family | Camera Type | Data Backhaul | |
|---|---|---|---|
| **L**=LumenSafe Technology LumenSafe Technology CLICK HERE | **D**=Dome Camera | **C**=Cellular, Customer Installed SIM Card<br>**A**=Cellular, Factory Installed AT&T SIM Card<br>**V**=Cellular, Factory Installed Verizon SIM Card<br>**S**=Cellular, Factory Installed Sprint SIM Card | **E**=Ethernet Networking |

## STOCK ORDERING INFORMATION

| Product Family | Light Engine | Voltage | Distribution | **Options** (Add as Suffix) |
|---|---|---|---|---|
| **PRVS**=Prevail | **C15**=(1 LED) 7,100 Nominal Lumens<br>**C25**=(2 LEDs) 13,100 Nominal Lumens<br>**C40**=(2 LEDs) 17,100 Nominal Lumens<br>**C60**=(2 LEDs) 20,000 Nominal Lumens | **UNV**=Universal (120-277V)<br>**347**=347V [2] | **T3**=Type III<br>**T4**=Type IV | **MSP/DIM-L30**=Integrated Sensor for Dimming Operation, Maximum 30' Mounting Height [2] |
| **PRVS-XL**=Prevail | **C75**=(4 LEDs) 26,100 Nominal Lumens<br>**C100**=(4 LEDs) 31,000 Nominal Lumens<br>**C125**=(4 LEDs) 36,000 Nominal Lumens<br>**C150**=(6 LEDs) 41,100 Nominal Lumens<br>**C175**=(6 LEDs) 48,600 Nominal Lumens | | | |

**NOTES: 1.** All stock configurations are standard 4000K/70CRI, bronze finish, and include the standard versatile mounting arm. **2.** Only available in PRVS configurations C15, C25, C40 or C60.

| | |
|---|---|
| **Date:** | **Approved:** |
| **Type:** H | TYPE: H |
| **Fixture:** FCW3362-120-LED-4K-750-BZ | |
| **Project:** Kiddie Academy | |

# FCW3260, FCW3262, FCW3263

Diamond Shaped Die-Cast Aluminum–Ceiling, Wall, or Surface Mounted.

FCW3260 FCW3262 FCW3263

## ORDERING

**EXAMPLE:** FCW3260-120V-LED-4K-1000-SL-F

| SERIES | VOLTAGE | SOURCE/TEMPERATURE/LAMP | | | FINISH | | ACCESSORIES | |
|---|---|---|---|---|---|---|---|---|
| **FCW3260** | **120V** | **PL** | | **2/13Q 26Q 2/26Q** | **BK** | Black | **D** | Dimming |
| **FCW3262** | **277V** | **LED** | **3K** | **750** Lumens (30W) | **BZ** | Bronze | **LD** | LED Dimming |
| **FCW3263** | **347V△** | | **35K** | **850** Lumens (30W) | **CC** | Custom Color | **EMR** | Emergency Backup, Remote *(PL only, LED△)* |
| | | | **4K** | **2200** Lumens (30W)▲ | **SL** | Silver | **F** | Fuse |
| | | | | | **WH** | White | | |

△contact factory

▲FCW3260, FCW3263

## SPECIFICATION

### MOUNTING

- For ceiling/surface mount or wall applications: Mounting holes allow unit to be attached directly to mounting surface or junction box.

### CONSTRUCTION

- Marine grade, corrosion resistant, heavy walled, high pressure die-cast aluminum construction.
- Impact resistant, UV stabilized, white opal, polycarbonate. Vandal resistant.
- Neoprene continuous closed cell urethane 'O' ring gasket to seal out contaminants.
- Captive stainless steel, tamper resistant hex socket screws.

### LED

- Lumens stated are the minimum delivered out of the luminaire. LED lifetime is greater than or equal to 70,000 hours with the lumen depreciation greater than L70. All of our luminaires are LM-80 tested and are ≥ CRI80, with a 4-step MacAdam Ellipse color consistency. Integral power supply standard. Input voltage 120V or 277V standard.

### FINISH

- Six stage chemical pre-treatment process that includes iron phosphate, to prepare the substrate for a UV stable, super durable standard polyester powder coat. Optional e-coat process is added to the standard finish including zinc phosphate for a 5 year limited warranty.

### ELECTRICAL

- **Socket** PL: Four pin plug-in type compact fluorescent lamp holder. HID: G12 base porcelain socket.
- **Ballast** PL: Fluorescent electronic. HID: Remote electronic ballast standard. Ballast has a manufacturer issued 5 year warranty. Electronic universal voltage 120V or 277V is standard. Please consult factory for other voltage options.

### LISTING

- UL & cUL/ETL, U.S. and CA listed for wet locations. IP65 rating.
- Suitable for interior or exterior application.

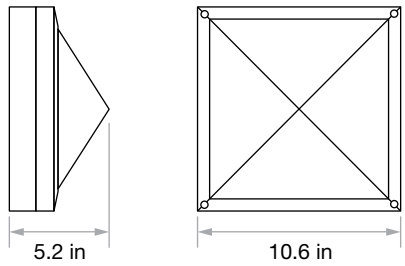
FC Lighting, Inc. reserves the right to change details or specifications without notice. Product use certifies agreement to FC Lighting's terms and conditions.

TYPE: H

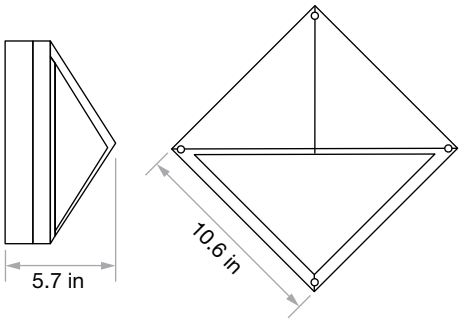
## PHOTOMETRY

## DIMENSIONS

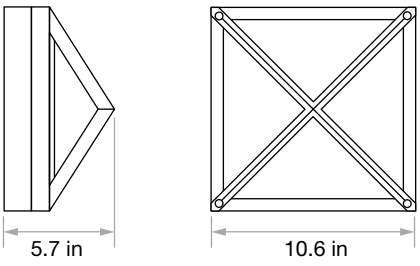
### FCW3260




### FCW3262




### FCW3263




FC Lighting, Inc. reserves the right to change details or specifications without notice. Product use certifies agreement to FC Lighting's terms and conditions.

# Lumark

## DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

| | | Type |
|---|---|---|
| Catalog # | XTOR3A | WP |
| Project | | |
| Comments | | Date |
| Prepared by | | |

## SPECIFICATION FEATURES

**Construction**
Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

**Optical**
Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K and 4000K CCT.

**Electrical**
LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

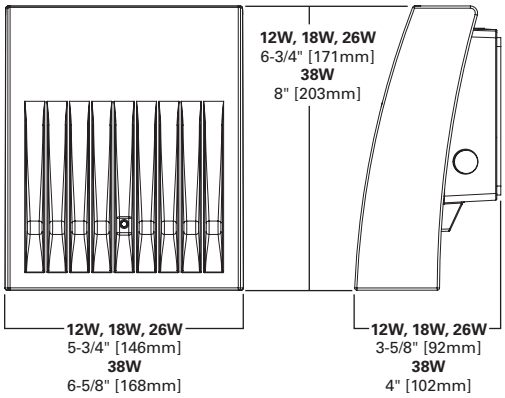
**Finish**
Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

**Warranty**
Five-year warranty.

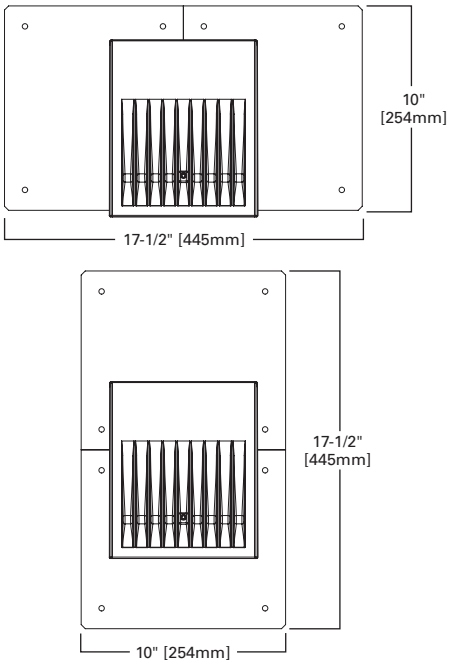
# XTOR
## CROSSTOUR LED

**APPLICATIONS:**
**WALL / SURFACE**
**POST / BOLLARD**
**LOW LEVEL**
**FLOODLIGHT**
**INVERTED**
**SITE LIGHTING**

## DIMENSIONS




## ESCUTCHEON PLATES




## CERTIFICATION DATA
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
ADA Compliant
NOM Compliant Models
IP66 Ingressed Protection Rated
Title 24 Compliant
DesignLights Consortium™ Qualified*

## TECHNICAL DATA
40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

## EPA
**Effective Projected Area** (Sq. Ft.):
**XTOR1B, XT0R2B, XT0R3B**=0.34
**XTOR4B**=0.45

## SHIPPING DATA:
**Approximate Net Weight:**
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

EATON
Powering Business Worldwide

*www.designlights.org

## LUMENS - CRI/CCT TABLE

| LED Information | XTOR1B | XTOR1B-W | XTOR2B | XTOR2B-W | XTOR3B | XTOR3B-W | XTOR4B | XTOR4B-W |
|---|---|---|---|---|---|---|---|---|
| Delivered Lumens (Wall Mount) | 1,418 | 1,396 | 2,135 | 2,103 | 2,751 | 2,710 | 4,269 | 4,205 |
| Delivered Lumens (With Flood Accessory Kit) [1] | 1,005 | 990 | 1,495 | 1,472 | 2,099 | 2,068 | 3,168 | 3,121 |
| B.U.G. Rating [2] | B1-U0-G0 | B1-U0-G0 | B1-U0-G0 | B1-U0-G0 | B1-U0-G0 | B1-U0-G0 | B2-U0-G0 | B2-U0-G0 |
| CCT (Kelvin) | 5,000 | 4,000 | 5,000 | 4,000 | 5,000 | 4,000 | 5,000 | 4,000 |
| CRI (Color Rendering Index) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Power Consumption (Watts) | 12W | 12W | 18W | 18W | 26W | 26W | 38W | 38W |

**NOTES: 1** Includes shield and visor. **2** B.U.G. Rating does not apply to floodlighting.

## LUMEN MAINTENANCE

| Ambient Temperature | TM-21 Lumen Maintenance (72,000 Hours) | Theoretical L70 (Hours) |
|---|---|---|
| **XTOR1B Model** | | |
| 25°C | > 90% | 255,000 |
| 40°C | > 89% | 234,000 |
| 50°C | > 88% | 215,000 |
| **XTOR2B Model** | | |
| 25°C | > 89% | 240,000 |
| 40°C | > 88% | 212,000 |
| 50°C | > 87% | 196,000 |
| **XTOR3B Model** | | |
| 25°C | > 89% | 240,000 |
| 40°C | > 88% | 212,000 |
| 50°C | > 87% | 196,000 |
| **XTOR4B Model** | | |
| 25°C | > 89% | 222,000 |
| 40°C | > 87% | 198,000 |
| 50°C | > 87% | 184,000 |

## CURRENT DRAW

| Voltage | Model Series | | | |
|---|---|---|---|---|
| | XTOR1B | XTOR2B | XTOR3B | XTOR4B |
| 120V | 0.103A | 0.15A | 0.22A | 0.34A |
| 208V | 0.060A | 0.09A | 0.13A | 0.17A |
| 240V | 0.053A | 0.08A | 0.11A | 0.17A |
| 277V | 0.048A | 0.07A | 0.10A | 0.15A |
| 347V | 0.039A | 0.06A | 0.082A | 0.12A |

## ORDERING INFORMATION

**Sample Number**: XTOR2B-W-WT-PC1

| Series | LED Kelvin Color | Housing Color | **Options** (Add as Suffix) | **Accessories** (Order Separately) |
|---|---|---|---|---|
| **XTOR1B**=Small Door, 12W<br>**XTOR2B**=Small Door, 18W<br>**XTOR3B**=Small Door, 26W<br>**XTOR4B**=Medium Door, 38W | **[Blank]**=Bright White (Standard), 5000K<br>**W**=Neutral White, 4000K | **[Blank]**=Carbon Bronze (Standard)<br>**WT**=Summit White<br>**BK**=Black<br>**BZ**=Bronze<br>**AP**=Grey<br>**GM**=Graphite Metallic<br>**DP**=Dark Platinum | **PC1**=Photocontrol 120V [1]<br>**PC2**=Photocontrol 208-277V [1, 2]<br>**347V**=347V [3]<br>**HA**=50°C High Ambient [3] | **WG/XTOR**=Wire Guard [4]<br>**XTORFLD-KNC**=Knuckle Floodlight Kit [5]<br>**XTORFLD-TRN**=Trunnion Floodlight Kit [5]<br>**XTORFLD-KNC-WT**=Knuckle Floodlight Kit, Summit White [5]<br>**XTORFLD-TRN-WT**=Trunnion Floodlight Kit, Summit White [5]<br>**EWP/XTOR**=Escutcheon Wall Plate, Carbon Bronze<br>**EWP/XTOR-WT**=Escutcheon Wall Plate, Summit White |

**NOTES:**
**1.** Photocontrols are factory installed.
**2.** Order PC2 for 347V models.
**3.** Thru-branch wiring not available with HA option or with 347V. Not available with XTOR3B and XTOR4B.
**4.** Wire guard for wall/surface mount. Not for use with floodlight kit accessory.
**5.** Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

## STOCK ORDERING INFORMATION

| 12W Series | 18W Series | 26W Series | 38W Series |
|---|---|---|---|
| **XTOR1B**=7W, 5000K, Carbon Bronze | **XTOR2B**=18W, 5000K, Carbon Bronze | **XTOR3B**=26W, 5000K, Carbon Bronze | **XTOR4B**=38W, 5000K, Carbon Bronze |
| **XTOR1B-WT**=12W, 5000K, Summit White | **XTOR2B-W**=18W, 4000K, Carbon Bronze | **XTOR3B-W**=26W, 4000K, Carbon Bronze | **XTOR4B-W**=38W, 4000K, Carbon Bronze |
| **XTOR1B-PC1**=12W, 5000K, 120V PC, Carbon Bronze | **XTOR2B-WT**=18W, 5000K, Summit White | **XTOR3B-WT**=26W, 5000K, Summit White | **XTOR4B-WT**=38W, 5000K, Summit White |
| **XTOR1B-W**=12W, 4000K, Carbon Bronze | **XTOR2B-PC1**=18W, 5000K, 120V PC, Carbon Bronze | **XTOR3B-PC1**=26W, 5000K, 120V PC, Carbon Bronze | **XTOR4B-PC1**=38W, 5000K, 120V PC, Carbon Bronze |
| **XTOR1B-W-PC1**=12W, 4000K, 120V PC, Carbon Bronze | **XTOR2B-W-PC1**=18W, 4000K, 120V PC, Carbon Bronze | | **XTOR4B-W-PC1**=38W, 4000K, 120V PC, Carbon Bronze |