

**To:** Members of the Board of Zoning Appeals

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

**Date:** April 8, 2020

Re: CONTINUED PUBLIC HEARING - DEVELOPMENTAL STANDARDS

**VARIANCES** 

BZA 20-002 Community Foundation of Northwest Indiana requesting developmental standards variances from Table 26-6.405.A-7 to exceed the maximum lot size and reduce the frontage buildout in a CD-4.B District, from Section 26-6405.O.1.d to exceed the number of required parking spaces by greater than 10%, and from Section 26-6.122D.2.b to alter a nonconforming sign in order to resubdivide property and expand a parking lot

at 541 Otis Bowen Drive.

At the request of the applicant, the Board of Zoning Appeals tabled Docket No. 20-002 at their March 10, 2020 meeting without holding a public hearing. The Chairman should hold the public hearing at the April 14, 2020 meeting.

Since the application has not been changed since March, I have attached the March staff report for the Board's consideration.



**To:** Members of the Board of Zoning Appeals

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

**Date:** March 5, 2020

Re: PUBLIC HEARING - DEVELOPMENTAL STANDARDS VARIANCES

BZA 20-002 Community Foundation of Northwest Indiana requesting developmental standards variances from Table 26-6.405.A-7 to exceed the maximum lot size and reduce the frontage buildout in a CD-4.B District, from Section 26-6405.O.1.d to exceed the number of required parking spaces by greater than 10%, and from Section 26-6.122D.2.b to alter a nonconforming sign in order to resubdivide property and expand a parking lot

at 541 Otis Bowen Drive.

**Applicant:** Community Foundation of Northwest Indiana / Dave Otte

**Property Address:** 541 Otis Bowen Drive

Current Zoning: CD-4.B General Urban B Character District

**Adjacent Zoning:** North: CD-4.B

South: PUD - Hartsfield Village

East: CD-4.B West: CD-4.B

**Action Requested:** Approval of variances

**Additional Actions Required:** Findings of Fact

Attachments: Hospice Second Addition Plan Set prepared by Torrenga Engineering,

dated 03.04.2020. Landscape Plan prepared by Lakeshore

Landscaping dated 03.03.2020. Photometric Plan prepared by KSA

Lighting, dated 02/19/2020.

Community Healthcare System sign rendering prepared by ICU

Outdoor Advertising dated 01.14.2020

#### **Background**

Community Foundation of Northwest Indiana (CFNI) has purchased two lots at 541 Otis Bowen Drive along with a portion of the property owned by The Gate Church at 9900 Columbia Ave. They are now seeking to expand the parking lot of the existing office building in order to accommodate the Community Healthcare System Patient Financial Services offices. The existing parking lot is built to the edge of the lot line, so they are applying for approval to resubdivide the property to widen the office lot to accommodate additional parking and create two new lots to the east. CFNI is also seeking to reuse an existing non-conforming monument sign located at the south edge of the property. Site and engineering plans have been provided with the application. In addition to the variances, the proposal requires subdivision and development plan approval from the Plan Commission.

Subdivisions, parking lot expansions, and sign alterations are all subject to the standards in the Munster Zoning Code. Because the property has already been developed under the standards of an O-1 zoning district, it is in conflict with some of the standards of its current CD-4.B district.



Figure 1: Subject Property

In order to construct the plan as proposed, the petitioner is requesting the following variances:

CODE CITATION	REQUIRED	PROPOSED
Table 26-6.405.A-7 LOT OCCUPATION - MAXIMUM LOT SIZE	180 feet maximum	300.87 feet
Table 26-6.405.A-7 BUILDING STANDARDS – FAÇADE MINIMUM FRONTAGE BUILDOUT  Section 26.405.E.2 Frontage Buildout. In each Character District, the Facade of the Principal Building shall be built along the minimum percentage of the Front Lot Line width at the Setback, specified as Frontage Buildout on Tables 26-6.405.A-1 - 26-6.405.A-10 (District Standards). A Streetscreen may be substituted for a Facade for up to twenty percent (20%) of the applicable Frontage Buildout requirement.	60% (181 feet)  A street screen may be substituted for up to 20% of the minimum (36 feet)	55% (164 feet including 128 feet of building and 36 feet of street screen)
PARKING  Section 26-6.405.O.1.d  The number of spaces of parking available to a Lot shall not be less than, nor more than 10% greater than, the number of spaces of parking determined by Table 26-6.405.O-1 (Vehicular Parking Requirements) based on the quantity of Principal Use(s) of the Lot, provided that the minimum number of spaces may be reduced pursuant to Section 26-6.405.O.1.e and Section 26-6.405.O.1.f.	62 - 76 parking spaces	Additional 62 parking spaces proposed for a total of 138 spaces

SIGNS	10 foot setback	The existing
Section 26-6.122D.2.b		monument
If a Nonconforming Sign is Altered, the legal status of such		has a 5 foot
Nonconforming Sign shall terminate and such Sign must conform		setback and
to this article.		will be refaced
		with the
Table 26-6701.B Sign Types Specific standards		Community
Monument Signs		Hospital
In addition to all other applicable standards, each Monument		_
Sign allowed under this Article:		
a. shall be located within the 1st Lot Layer and shall be set back at		
least 10 feet from the public right-of way;		

#### **ANALYSIS**

In considering the application presented here, the BZA may want to consider the following:

The intent of the recently adopted zoning ordinance was to promote a finer grained, more walkable community. The subject property was developed under zoning standards that were developed to promote a campus like built environment, so it is already non-conforming in a few ways.

Both the lot width and the sign variance requests are simply an expansion or extension of an existing non-conformity. The other variances are a result of the proposal to reuse an existing building for a more intense use, which requires the expansion of the parking lot.

Most of the modifications to the parking lot comply with the Town standards. These include lighting, landscaping, parking lot screeningz, and installation of a new sidewalk. So while the proposal is for an expansion of the non-conformity, the improvements themselves conform to the codes.

A preliminary hearing was held before the Board of Zoning Appeals on February 11, 2020. After the preliminary hearing, the applicant revised the plans. The revisions include:

- The landscaping plan was revised to comply with the current landscaping ordinance.
- 2. One parking space was removed to accommodate additional landscaping.
- 3. One additional ADA space was added.
- 4. Light fixture spec sheets were added.
- 5. Miscellaneous corrections were made to the plat.

Members of the Board of Zoning Appeals and Plan Commission requested that the sidewalk be extended along Otis Bowen Drive to Columbia Ave. The plans show a sidewalk is to be installed along Otis Bowen Drive, but not extend east of the subject property.

Staff recognizes that existing buildings and lot may have difficulty complying with the standards of the recently adopted codes and recommends that the BZA, in those instances, consider granting the minimum variance necessary to relieve these difficulties.

#### Variance Standards

The variance process is established to provide relief to a property owner when, due to unique circumstances, compliance with the zoning code imposes a hardship or practical difficulty on a property owner. The BZA is under no obligation to grant a variance. It is the petitioner's responsibility to prove a hardship or practical difficulty. The BZA should ask the petition to address the criteria listed below.

Sec. 26-6.804.I of the Munster Zoning Code states that the basis for a variance is as follows:

#### g. General Standards.

A Variance may be granted only if the Decision- Making Authority has made the following determinations for such Variance:

- i. the practical difficulties or unnecessary hardships that would be incurred by strict application of the Use or Development standard, as applicable, are unique and not shared by all properties in the vicinity and are not self-imposed;
- ii. such Variance is the minimum Variance that will relieve such practical difficulties or unnecessary hardships, as applicable;
- iii. such Variance is in the spirit of the general purposes and intent of this Article as stated in Division 1; and
- iv. such Variance is so designed as to provide reasonable consideration to, among other things, the character of the neighborhood, District, or Civic Zone, the conservation of property values in the vicinity, and the guidance of Development in accordance with the Comprehensive Plan.

#### h. Specific to Development standards Variances:

A Variance from Development Standards may be approved or approved with conditions only if:

- i. it will not be injurious to the public health, safety, morals, and general welfare of the community;
- ii. the use and value of the area Adjacent to the property included in the Variance will not be affected in a substantially adverse manner; and
- iii. the strict application of the Development standards will result in practical difficulties in the use of the property.

#### Recommendation

Staff recommends the following motion:

Motion to approve BZA Docket No. 20-002 granting developmental standards variances from Table 26-6.405.A-7 to exceed the maximum lot size and reduce the frontage buildout in a CD-4.B District, from Section 26-6405.O.1.d to exceed the number of required parking spaces by greater than 10%, and from Section 26-6.122D.2.b to alter a nonconforming sign in order to resubdivide property and expand a parking lot at 541 Otis Bowen Drive.

# MUNSTER, LAKE COUNTY, INDIANA

	INDEX
PAGE	DESCRIPTION
COVER	TITLE PAGE
C-1.0	EXISTING TOPOGRAPHY & UTILITIES
C-2.0	SITE PLAN
C-3.0	STORM SEWER & GRADING PLAN
C-4.0	DETAILS & SPECIFICATIONS
C-5.0	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
C-6.0 to 6.1	SWPPP DETAILS & SPECIFICATIONS
L1.0	LANDSCAPE PLAN
1 OF 1	PHOTOMETRIC PLAN
1 OF 1	FINAL PLAT

LEGAL DESCRIPTION AS TAKEN FROM CHICAGO TITLE INSURANCE
COMPANY TITLE COMMITMENT ORDER NUMBER CTNW1900620 DATED
FEBRUARY 8, 2019

#### Parcel A:

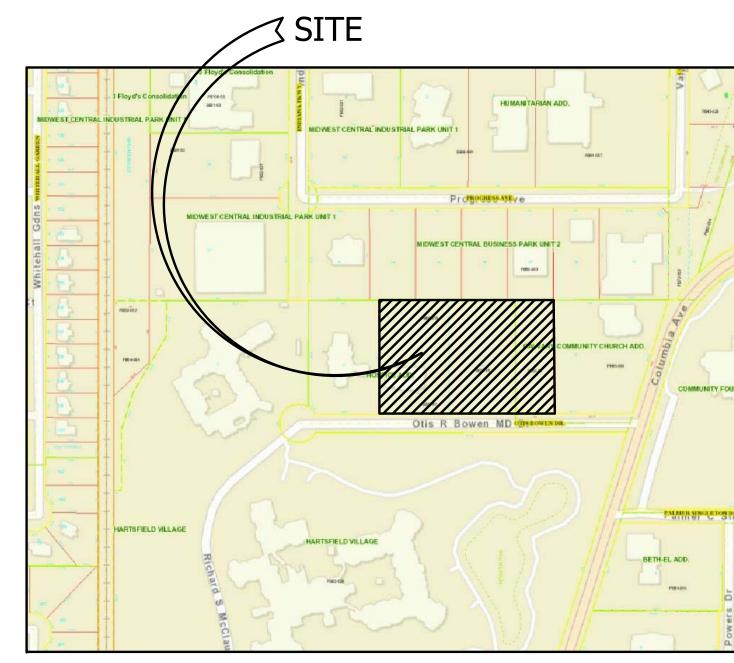
The West 125.0 feet of Lot 1, in Calvary Community Church Addition to the Town of Munster, as per plat thereof, recorded in Plat Book 85, page 60, in the Office of the Recorder of Lake County, Indiana.

#### Parcel B:

Lot 3, Hospice Addition to the Town of Munster, as per plat thereof, recorded in Plat Book 80 page 16, in the Office of the Recorder of Lake County, Indiana.

#### Parcel C:

Lot 2, Hospice Addition to the Town of Munster, as per plat thereof, recorded in Plat Book 80 page 16, in the Office of the Recorder of Lake County, Indiana.







NOT TO SCALE

NOTES: 1. TOTAL SITE AREA =  $1.583\pm$  ACRES ( $68,992.86\pm$  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 18089C0117E, EFFECTIVE DATE JANUARY 18, 2012.
- 3. ALL VERTICAL DATUM IS BASED ON NAVD88.
- 4. HYDROLOGIC UNIT CODES: 07120003040040 THORN CREEK-NORTH CREEK
- 5. LOCATION: LATITUDE - 41°31'59" N LONGITUDE - 87°30'48" W
- 6. CURRENT ZONING: CD-4.B



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



"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.

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.

### Date and Revisions:

5	03-04-2020	Submittal #5	DT
4	02-21-2020	Submittal #4	DT
3	02-04-2020	Lot Size Revision	DT
2	01-31-2020	Submittal #2	DT/RT/MS
1	12-27-2019	Submittal #1	DT/RT/LP
NO	DATE	DESCRIPTION	RV

DEVELOPER: CFNI 901 MacArthur Blvd. Munster, IN 46321

ENGINEER:

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

DRAWING SET PROGRESS:

 $\bowtie$ 

ENGINEERING PLAN



FINAL ENGINEERING
- FOR CONSTRUCTION

LEGAL DESCRIPTION AS TAKEN FROM CHICAGO TITLE INSURANCE COMPANY TITLE COMMITMENT ORDER

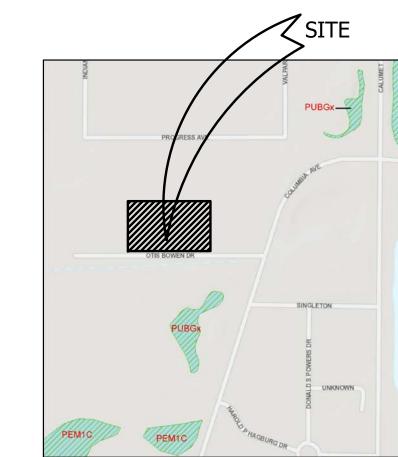
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<b>\$</b>	LIGHT POLE
•	MANHOLE
0	CLEAN OUT
0	CATCH BASIN
	REAR YARD DRAIN
₩	WATER VALVE
<b>A</b>	FIRE HYDRANT
$\otimes$	6" STEEL POST
⊡	VOLLEYBALL POST
⋊G	GAS VALVE
⊗G	GAS METER
<b>S</b>	ELECTRIC METER
U	UTILITY VAULT
6	SIGN
∨⊠	CABLE BOX
T	TELEPHONE BOX
A	SIGN LIGHT
$\boxtimes$	A/C UNIT
м⊠	AMERITECH BOX
т⊠	AT&T BOX
XX.XX	EXISTING ELEVATION



VICINITY MAP NOT TO SCALE

NORTH

GRAPHIC SCALE

( IN FEET )

1 inch = 30 ft.





SHEET C - 1.0

WETLAND MAP NOT TO SCALE Source: National Wetlands Inventory

HOSPICE SECOND ADDITION 541 OTIS BOWEN DRIVE MUNSTER, LAKE COUNTY, INDIANA EXISTING TOPOGRAPHY & UTILITIES

INEERING, I & LAND SURVEYORS STER, INDIANA 46321

口

RRENGA CONSULTING 907 RIDGE 1 (219) 836–8918

03-04-02-21-01-31-2

### PAVEMENT AREA COMPUTATION

Pavement Area Existing 51,269 SF Pavement Area Proposed 16,750 SF

Total Pavement Area 68,019 SF

### LEGEND:

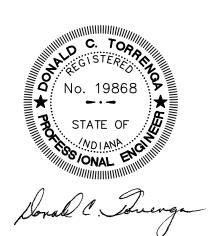
- NUMBER OF PARKING SPACES
- A PROPOSED ASPHALT PAVEMENT
- © HIGH BACK CURB
- B BARRIER CURB
- S SAVE EXISTING CURB
- (H) HANDICAP ACCESS
- W CONCRETE SIDEWALK WIDTH VARIES
- TRAFFIC FLOW ARROWS
- EXISTING LIGHT POLE
- **€** EXISTING LIGHT POLE

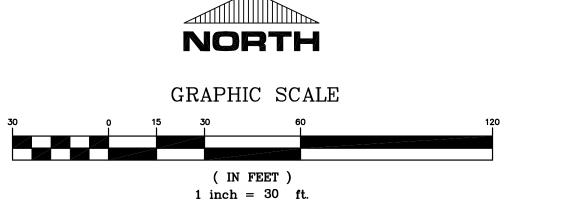
### <u>PARKING</u>

EXISTING PARKING SPACES - 73 STANDARD SPACES - 3 HANDICAP SPACES

PROPOSED PARKING SPACES - 60 STANDARD SPACES - 2 HANDICAP SPACES

TOTAL PARKING - 133 STANDARD SPACES - 5 HANDICAP SPACES



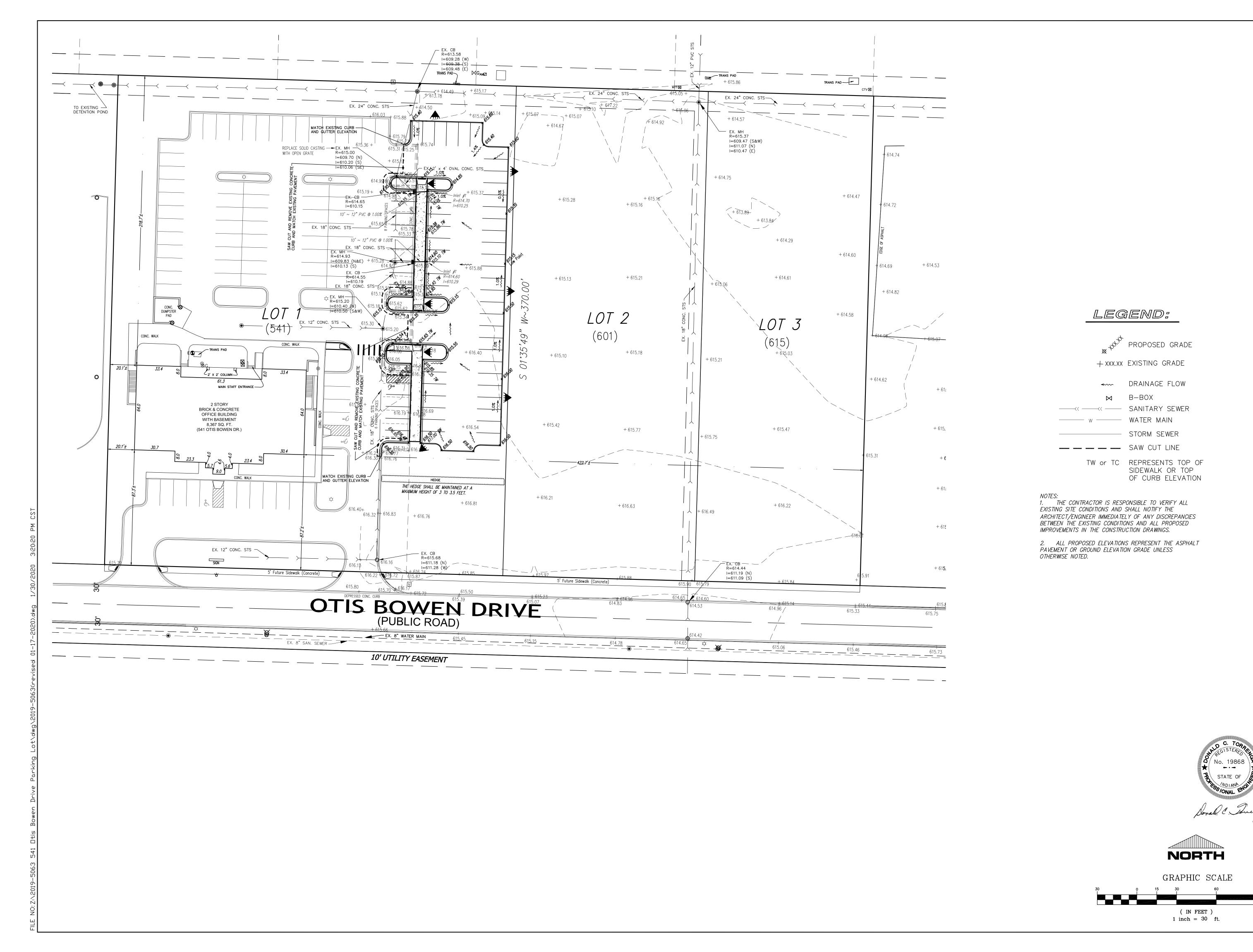


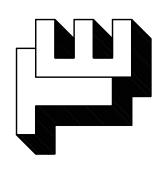
ENGINEERING ENGINEERS ROAD, MUNST

HOSPICE SECOND ADDITION 541 OTIS BOWEN DRIVE MUNSTER, LAKE COUNTY, INDIAN SITE PLAN

03-04-2020 02-21-2020 02-04-2020 01-31-2020

SHEET C - 2.0





ENGINI ENGINEERS ROAD, MUNST

HOSPICE SECOND ADDITION 541 OTIS BOWEN DRIVE MUNSTER, LAKE COUNTY, INDIANA STORM SEWER & GRADING PLAN

21-21-104-17-03-02-02-01-

SHEET C - 3.0 1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, Lake County, Indiana.

2. Each Lot in this Subdivision shall be provided with a 4" diameter storm sewer service tap extended from the main sewer to the street right of way line (or utility easement line) and located as nearly as possible to the center of each lot.

3. All storm sewer pipe, branches and fittings shall conform to either of the following: (A) Poly-vinyl chloride SDR 35 or SDR 26 (ASTM D-3034) with push on rubber gasket joints (ASTM C-3212) for pipe 15" in diameter or under or: (B) High Density Polyethylene corrugated pipe with an integrally formed smooth interior (ASTM D-1248) for pipe 18" or over 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.

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

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

6. All storm sewer manholes shall be standard precast concrete units (ASTM C-478) conforming with the standard details sheet of these plans.

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

8.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.

9. 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.

10. 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

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.

### **CURB NOTE:**

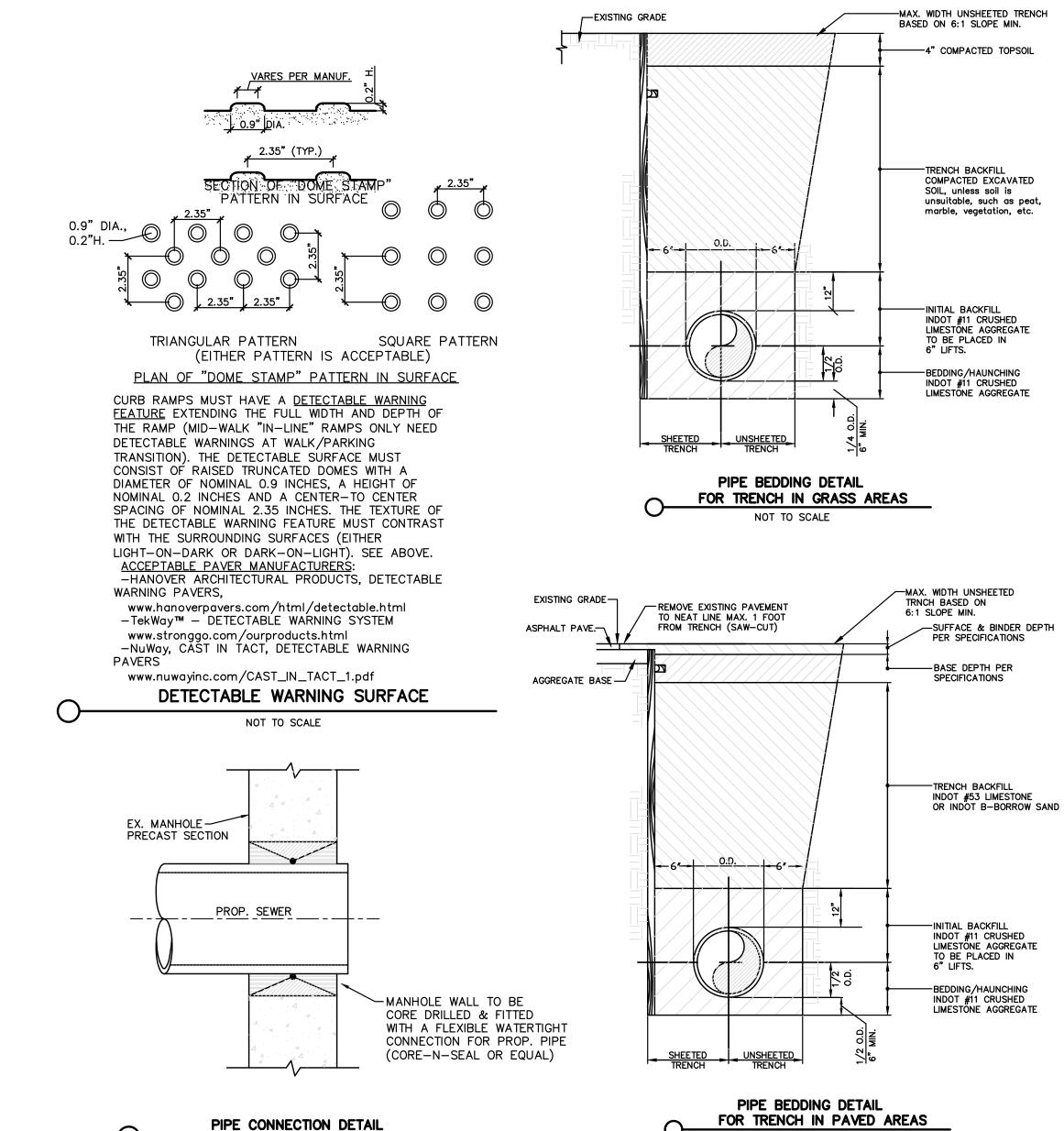
1. Concrete Curb and Gutter shall be constructed in accordance with the state specifications except as herin modified.

a) Expansion joints shall be 3/4" in thickness, using premolded joint filler material and two 3/4" diameter smooth round dowel bars 30" long fully greased, placed in pairs at the ends of all radii, at roadway intersections, at the junction of new and existing curb, at all cold joints, at a minimum 40' interval between said radii locations.

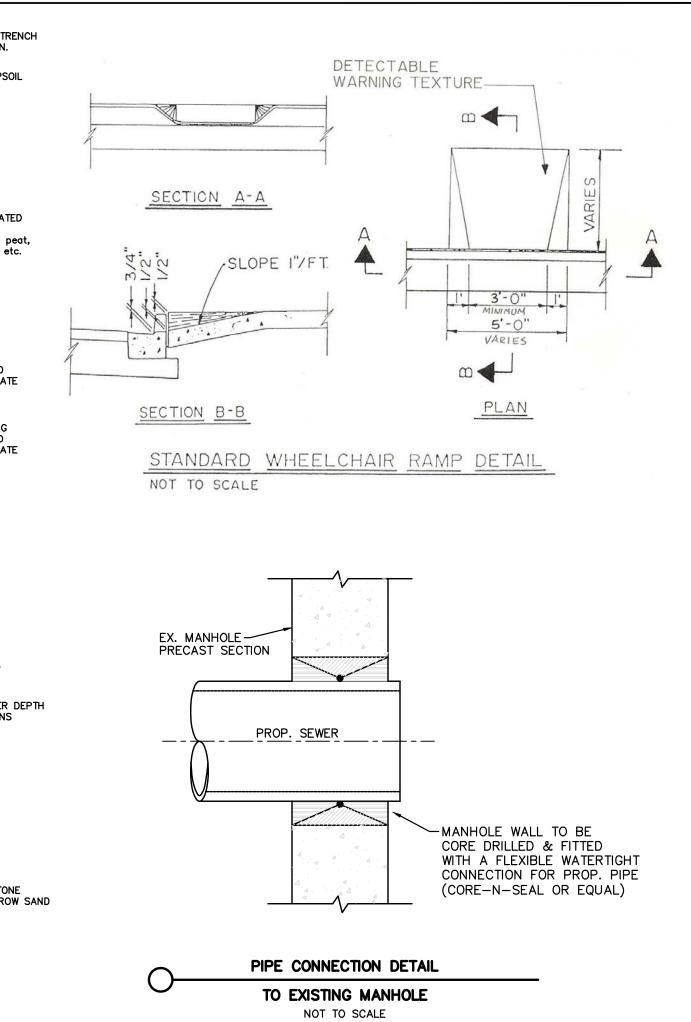
b) Said dowel shall be placed so that half their length is in either side of the joint. On the same end of each bar, there shall be placed a plastic, premolded expansion tip, which will allow lateral and expansion movement. The dowel bars shall be placed such that they shall be encased in concrete, a minimum of 3" in any direction.

#### **INFRASTRUCTURE NOTE:**

1. All infrastructures being constructed shall be in accordance with the Town of Munster Proposed Infrastructure Specifications. Any difference Munster's Specification and these engineering drawings shall be brought to the attention of the Engineer immediatelty for

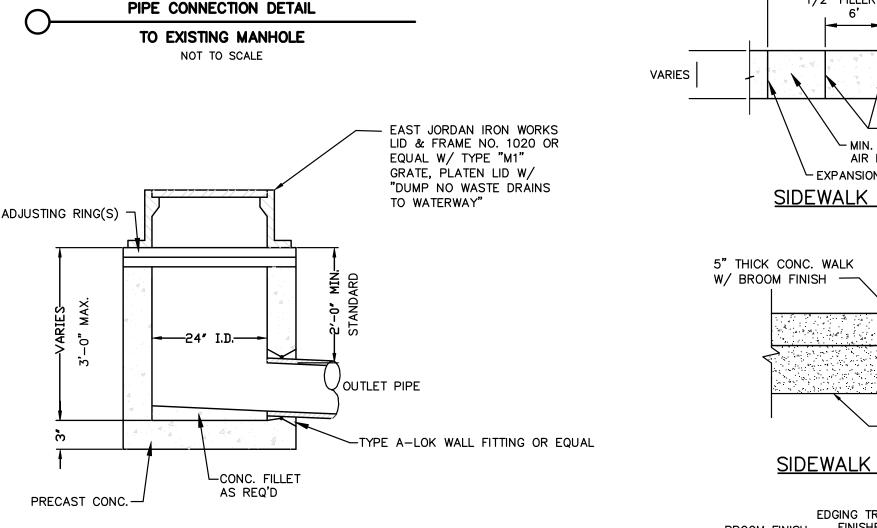


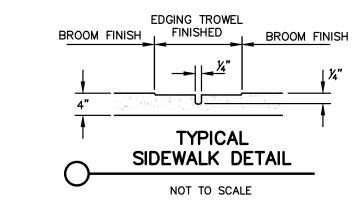
NOT TO SCALE

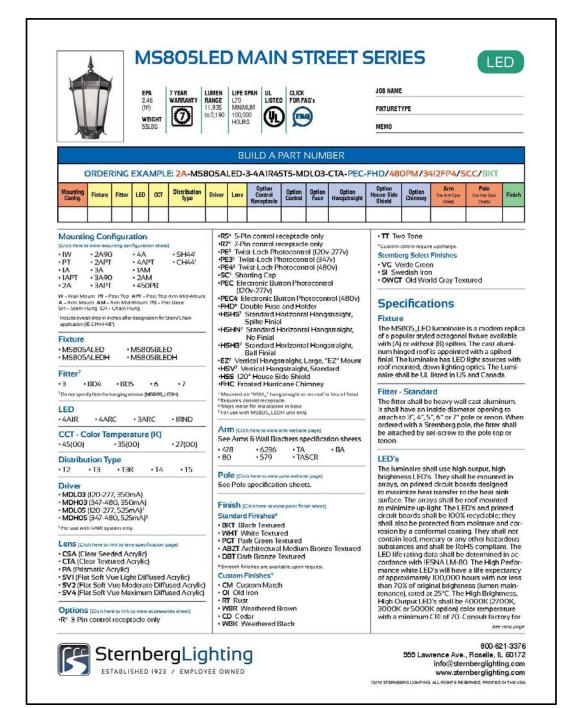


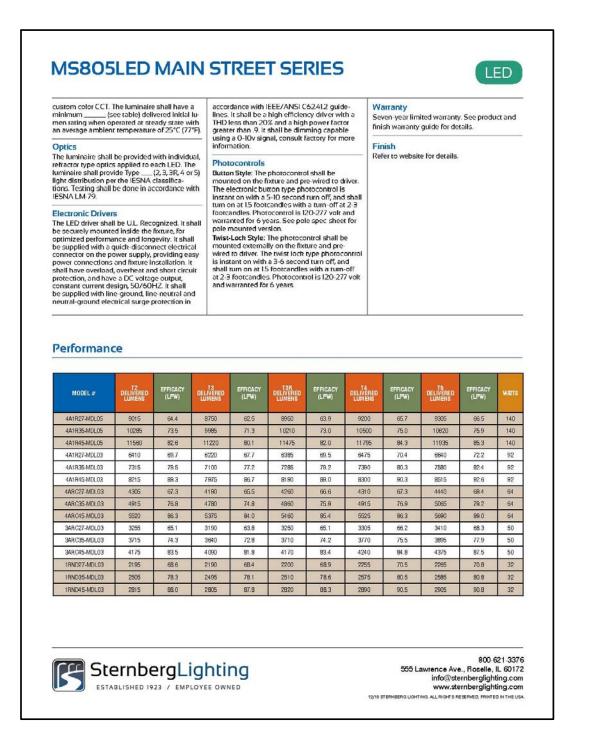
ALL CATCH BASINS SHALL BE CONSTRUCTED WITH PRECAST REINFORCED CONCRETE RISERS 5" THICK.

STANDARD INLET

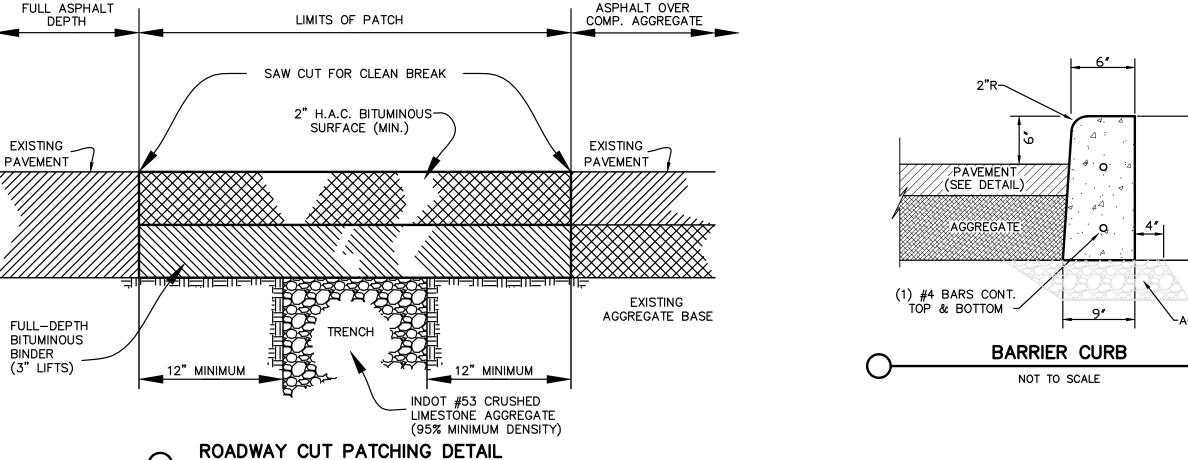


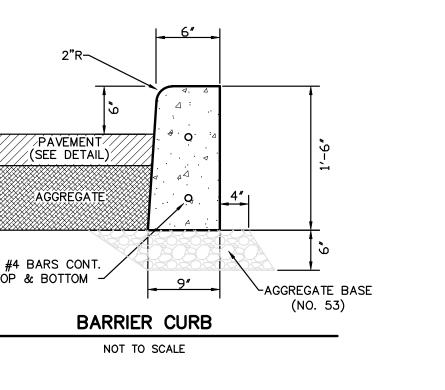






TO EXISTING MANHOLE NOT TO SCALE







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EXPANSION
OWEN DRIVE
OUNTY, INDIANA
PECIFICATIONS

PARKING 5411 OTIS ISTER, LAK ETAILS AN

LOT

1.5" H.A.C. SURFACE COURSE 2" H.A.C. BINDER COURSE 8" CRUSHED AGGREGATE BASE COURSE, INDOT #53 COMPACTED SUBGRADE

1'-6"

COMBINED CONCRETE HIGH BACK

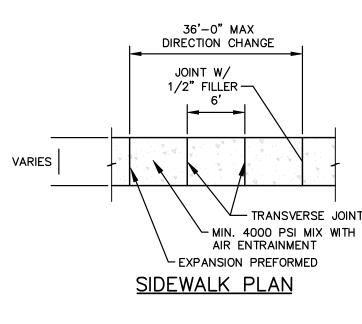
**CURB AND GUTTER** 

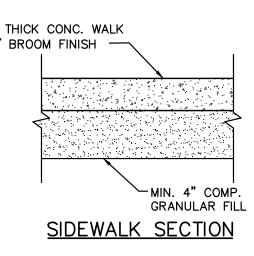
NOT TO SCALE

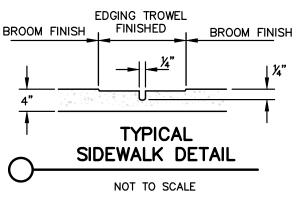
3 1/2"

1. 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

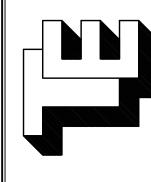






SHEET

C - 4.0



**GENERAL NOTES:** 

SHEET C - 5.0

ADDITION
I DRIVE
NTY, INDIA
EVENTION

CE SECOND
OTIS BOWEN
LAKE COUN

IOSPICE 541 OT STER, L/ POLLU

22.27

03-02-01-

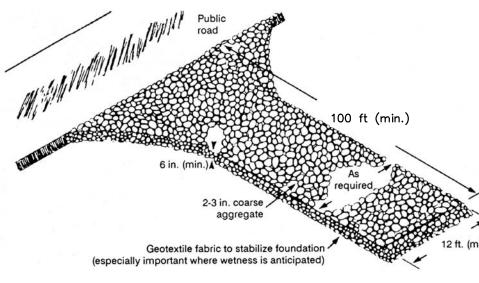
#### "GRAVEL" **Requirements:**

Width: 12 feet minimum or full width of entrance

Length: 100 feet minimum Material: 2-3 inch diameter washed stone (INDOT CA No. 2), with Geotextile Fabric Underliner. Thickness: 6 inch minimum

- Remove all vegetation and other objectionable material from the foundation area. Install pipe under the stone if needed to provide proper public road drainage.
- 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.

- 1. Inspect entrance pad for sediment deposits weekly and after storm events or heavy
- Reshape pad as needed for drainage and runoff control.
- Topdress with clean stone as needed.
- 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:**

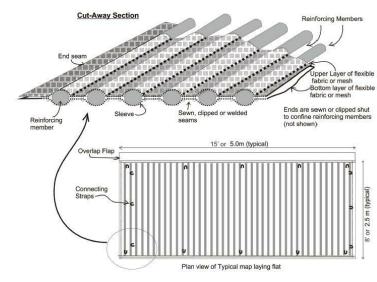
Width: 12 feet minimum or full width of entrance Length: 50 feet minimum

Material: Geotextile-Type mats, AGES Mud Mat or approved equal

#### Install pipe under mat if needed to provide proper site drainage.

- Install Geotextile-Type mat on the graded foundation area. Divert all surface runoff and drainage from the mat to sediment trap.

- Inspect entrance mat for sediment deposits weekly and after storm of a minimum of inch rainfall events or heavy use.
- Reshape pad as needed for drainage and runoff control. Repair or replace mats as needed.
- 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.

- 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.)

### 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.

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

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
			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 (SEEINERMANENT SEEDING) \*\* 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.

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.

- 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. Apply seed uniformly with a drill or cultipacker-seeder, or broadcasting, and cover to
- a depth of 1/4 to 1/2 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.)

- 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.)
- Plan to add fertilizer the following seasons according to soil test recommendations. 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
- 6. If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.

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.

Rate per acre

	a species and innitiales	species and mixtures		• p 50	
		Permanent	Dormont or frost		
OPE	N AND DISTURBED AREAS (REI	MAINING IDLE MOR	RE 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.		
STEE	EP BANKS AND CUTS, LOW MA	INTENANCE 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	20 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	

	⊥.	Smooth bromegrass	25 (0 35 108.	35 10 50 108.	5.5 (0 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	20 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	))		
		•	,		
	LAWN	IS AND HIGH MAINTENANCE AR	REAS		
	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.	
		INELS AND AREAS OF CONCENT	_		
	1.	Perennial ryegrass	100 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.	
4		+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
-4"	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.	
to	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

To provide early germination and soil stabilization in the spring. To reduce sediment runoff to downstream areas.

#### 3. To repair previous seedings.

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.

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) Broadcast fertilizer as recommended by soil test.

cover at the rate shown. (Do not work the seed into the soil.)

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

#### For Frost Seeding: (Seeding dates: Feb. 28 - Mar. 28)

lime, seed, and mulch at the time.)

Broadcast fertilizer as recommended by a soil test. 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

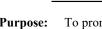
- 1. Apply 200-300 lbs./acre of 12-12-12 or equivalent fertilizer between Apr. 15 and May 10 or during periods of vigorous growth.
- 2. Re-seed and mulch any areas that have inadequate cover by mid- to late April. For best results, re-seed within the recommended dates shown for temporary seeding or for

#### **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.

#### Material: Straw, hay, wood fiber or excelsior, see table for Mulch Materials, Rates,

Optimum soil pH

and comments. Comments: Coverage: 75% of the soil surface

#### Anchoring Methods.

Apply mulch at the recommended rate.

Spread uniformly by hand, hay fork, mulch blower, or hydromulcher with no more than

If washout, breakage, or erosion is present, repair the surface, then re-seed, re-mulch.

Anchoring: Required to prevent displacement by wind or water, see table for Mulch

- 25% of the surface visible. 3. Anchor immediately if using straw or hay, using one of the following methods:
- Crimp with mulch anchoring tool. - Hydromulch with short cellulose fibers.

#### - Apply liquid tackifier. - Cover with netting secured with metal staples..

Inspect after storm events to check for movement of mulch or for erosion.

### 3. Continue inspections until vegetation is firmly established.

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 Long fiber wood (excelsior)	1 ton /acre 1/2-3/4 ton/acre	Apply with a hydromulcher and use with tacking agent.  Anchor in areas subject to wind.

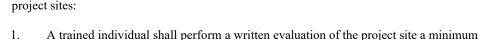
### Exhibit 3.15-D. Mulch Anchoring Methods.

Anchoring method	How to apply		
Mulch anchoring tool <u>OR</u> Farm disk (dull, serrated,	Crimp or punch the straw or hay into the soil 2-4 in.  Operate machinery on the contour of the slope.		
and set straight)			
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 simi- lar 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



of one (1) time per week and by the end of the next business day following each measurable storm event.

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;

the date of evaluation;

problems identified at the project site; and

details of corrective actions recommended and completed. 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. Evaluation reports must be maintained for a period of two (2) years from date of NOT.

All evaluation reports will be submitted to the Town of Munster when requested.

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 Town of Munster Engineer, in an organized fashion, within forty-eight (48) hours 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

Are all discharge points free of any noticeable erosion or sediment transport?
 Are designated equipment washout areas properly sited, clearly marked, and being

Are construction staging and parking areas restricted to areas designated as such on the

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?

soil stabilization practices r

3. Are all dewatering structures functioning properly?

4. Are all discharge points free of any noticeable pollutant discharges?

plans?

8. Are temporary soil stockpiles in approved areas and properly protected?

 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

#### 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:**

Other Waste Products: Petroleum Products Soil stabilizers/binders Asphalt Products, Dust palliatives Herbicides Concrete Curing Compounds,

 Pesticides. Growth inhibitor Acids, Fertilizers Paints, • Deicing/anti-icing chemicals

 Stains, Fuels Solvents, Lubricants Wood Preservatives, • Other petroleum distillates

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

Roofing Tar, or

**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

e. Cleanup of sediments that have been tracked by vehicles or have been transported

#### responsible for any and all spills associated with their work. d. Prompt cleanup of any spills that may occur of liquid or dry materials.

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: for local contact, the Lake County Emergency Management at Phone: 219-755-3549, and/or Fax: 219-755-3559; 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: for local contact, the Lake County Emergency Management at Phone:

219-755-3549, and/or Fax: 219-755-3559; the Indiana Emergency Response Hotline at 1-888-233-7745. e. The spill area shall be isolated from all surrounding areas with absorbent pads,

g. Emergency Response teams shall be contacted for extensive spills above and

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.

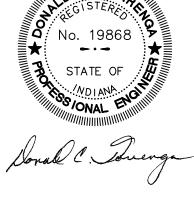
### beyond the containment by available methods.

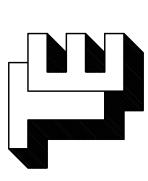
Waste Disposal Management Practices: All solid waste associated with the construction and development of this project shall be removed and disposed of properly with in all applicable state and federal laws associated with the waste generated. Developer and/or contractor are to provide on-site dumpsters, 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 Provide immediate cleanup of any container spills.

Make sure that construction waste is collected, removed, and disposed of only at authorized areas.





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### Trench:

8" minimum depth, flat bottom or v-shaped, filled with compacted soil or gravel to bury lower portion of support wire and/or fence fabric.

2" x 2" hardwood posts set at lease 1 foot deep.

Spacing of Posts: 8-foot maximum if fence supported by wire, otherwise 6 foot for extra strength fabric without wire backing.

A 3 feet minimum or high enough so depth of impounded water does not

exceed 1.5 feet at any point along fence line. 14 gauge, 6" mesh wire fence. (needed if using standard-strength fabric

Woven or non-woven Geotextile fabric with specified filtering efficiency and tensile strength and containing UV inhibitors and stabilizers to ensure 6 months minimum life at temperatures 0-120 degrees F.

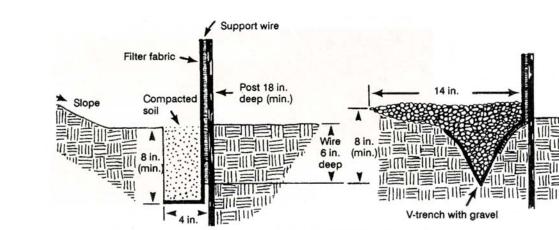
(optional)

- 1. Along the entire intended fence line, maintain contour as much as possible, dig an 8" deep flat bottom or v-shaped trench. 2. On the downslope side of the trench, drive the post at least 1 foot into the ground.
- (Note: If the fence has pre-attached posts or stakes, drive them deep enough so the fabric is satisfactorily in the trench per step 6)
- 3. Fasten support wire fence to the upslope side of the posts, extending it 8" into trench. (use only if required by manufacturer)
- 4. Run a continuous length of Geotextile fabric along upslope side of posts. 5. If a joint is necessary, nail the overlap to the nearest post with a wood lath. 6. Place the bottom 1' of fabric in the 8" deep trench, extending the remaining 4" of fabric
- toward the upslope side. 7. Backfill the trench with compacted earth.

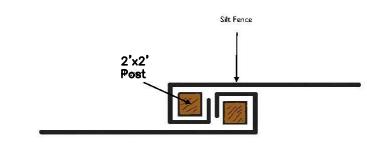
point or is causing the fabric to bulge.

disturbed area to grade and stabilize.

- 1. Inspect silt fence periodically and after each storm event. 2. If fence fabric tears, starts to decompose, or becomes ineffective, replace the affected
- Remove deposited sediment when it reaches half the height of the fence at its lowest
- 4. Take care to avoid undermining the fence during clean out. After watershed has been stabilized, remove fence and sediment deposits, bring the



Detailed example of silt fence installation (showing flat-bottom and v-shaped trenches).



### Silt Fence Wrap Joint Detail

### 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:**

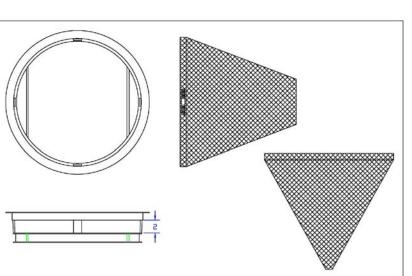
- before land disturbing activities begin in a stabilized area. Remove the grate, and place the basket assembly under the grate on the lip of the
- structure frame.
  - Replace the inlet/catch basin grate.

### Maintenance:

Inspect weekly during construction and after each storm event of a minimum of 1/2

Install protection to existing and newly installed inlet/catch basin in a new development

- inch rainfall, and remove built-up sediment. Replace bag every six (6) months.
- Replace the Geotextile fabric bag if there is a hole and/or won't pass water.
- Replace the Geotextile fabric bag after any oil, gasoline or solvent spill.



GENERAL NOTES:
FRAME: Top flange fabricated from 1½"x1½"x½" angle. Base rim fabricated from 1½"x½"x½" channel. Handles and suspension brackets fabricated from 1½"x½" 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

#### 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
- 4.) Locate away from other construction traffic to reduce the potential for damage to the
- 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.

(above grade systems).

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

- 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.

Dependent upon the type of system, either excavate the pit or install the containment

- 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
- 6.) Install signage that identifies concrete washout areas.

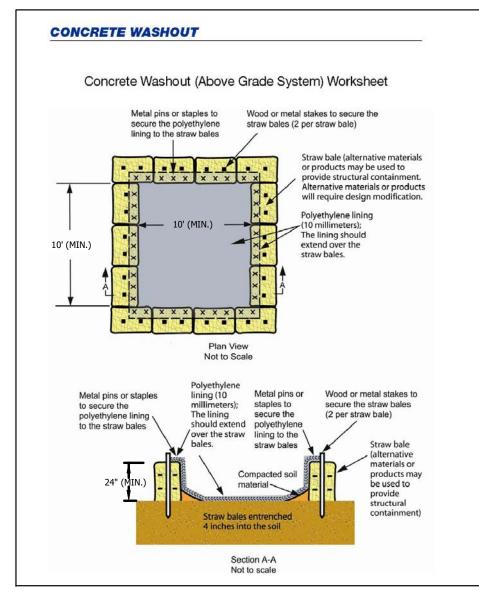
#### Post signs directing contractors and suppliers to designated locations.

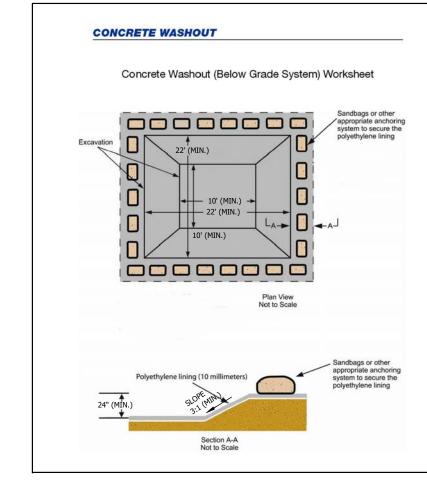
#### 1.) Inspect daily and after each storm event.

- 2.) Inspect the integrity of the overall structure including, where applicable, the
- 3.) Inspect the system for leaks, spills, and tracking of soil by equipment.
- Inspect the polyethylene lining for failure, including tears and punctures.

unless the manufacturer has alternate specifications.

- 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,
- 7.) Upon removal of the solids, inspect the structure. Repair the structure as needed or
- 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
- 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 concret shall be closed. Dispose of all hardened concrete and other materials used to construct the
- 15.) Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.





### TOPSOIL SALVAGE & UTILIZATION

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

#### **Specifications:**

Typically the darker, friable, loamy surface layer of soil found immediately below vegetation.

#### Storage Area

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

#### Salvaging and Stockpiling Topsoil Determine depth and suitability of topsoil at site.

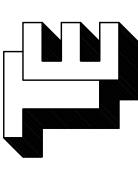
- Prior to stripping topsoil, install any site-specific down slope measures needed to control storm water runoff and sedimentation.
- 3. Remove soil material no deeper than the "surface soil".
- 4. Stockpile the material in accessible locations that will not interfere with other construction activities 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.
- Do not apply topsoil when the site is wet, muddy, or frozen. 4. After spreading the topsoil, grade and stabilize the site.

- Check for damage to perimeter barrier; repair immediately.
- 3. Check for erosion or damage to newly spread topsoil; repair immediately and





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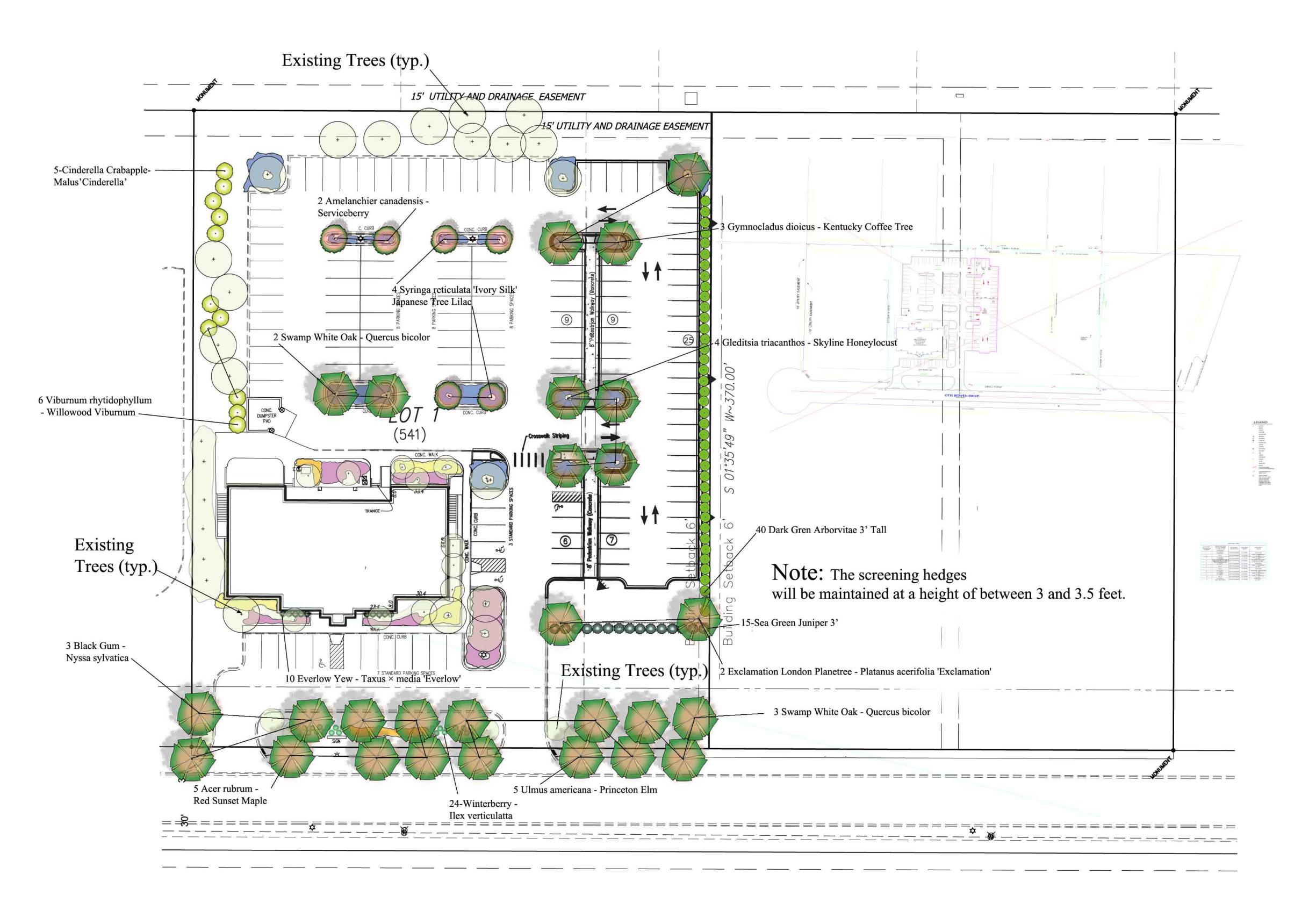
BOWEN

OTIS A AKE PPP

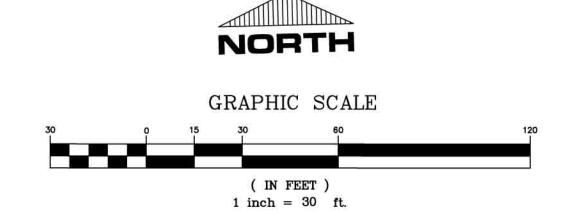
ENGINEERS ROAD, MUNST

RRENGA CONSULTING I 907 RIDGE R (219) 836–8918

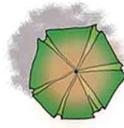
SHEET C - 6.1



# Hospice 2nd Addition Landscape Renovation Plan 03-03-20



## Plant Legend



Shade Trees - 2.5 to 3" caliper: Swamp White Oak, Kentucky Coffee Tree, Red Maple, Honeylocust, Black Gum



Ornamental Trees - 2 to 3" caliper: Serviceberry, Tree Lilac, Eastern Redbud



Dwarf Trees - 4-5' tall: Japanese Maple, Cinderella Crabapple, Blackhaw Viburnum, Leather-Leaf Viburnum



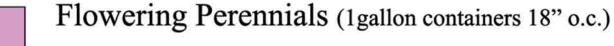
Dwarf Evergreen Shrubs - 18": Everlow Yews, Bird's Nest Spruce



Parking Lot Screening Shrubs - 24" height: Sea Green Juniper, Bayberry, Winterberry









Salt -Tolerant Perennials (1gallon containers 18" o.c.)



Ornamental Grasses (2gallon containers 24" o.c.)



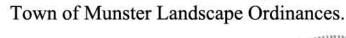
Low Profile Groundcover and Flowering Perennials (1gallon containers 18" o.c.)

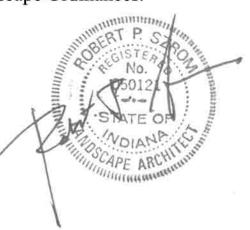
# All Landscape areas to be irrigated

The undersigned landscape architect, registered in the State of Indiana, acknowledges that the landscape planting plan and construction details shown on the attached landscape plans for the property at:

541 OTIS BOWEN DRIVE

Town of Munster, Indiana has been designed 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

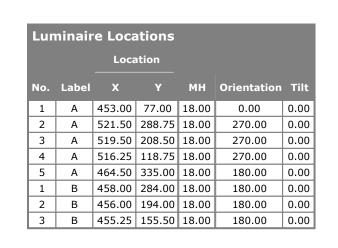


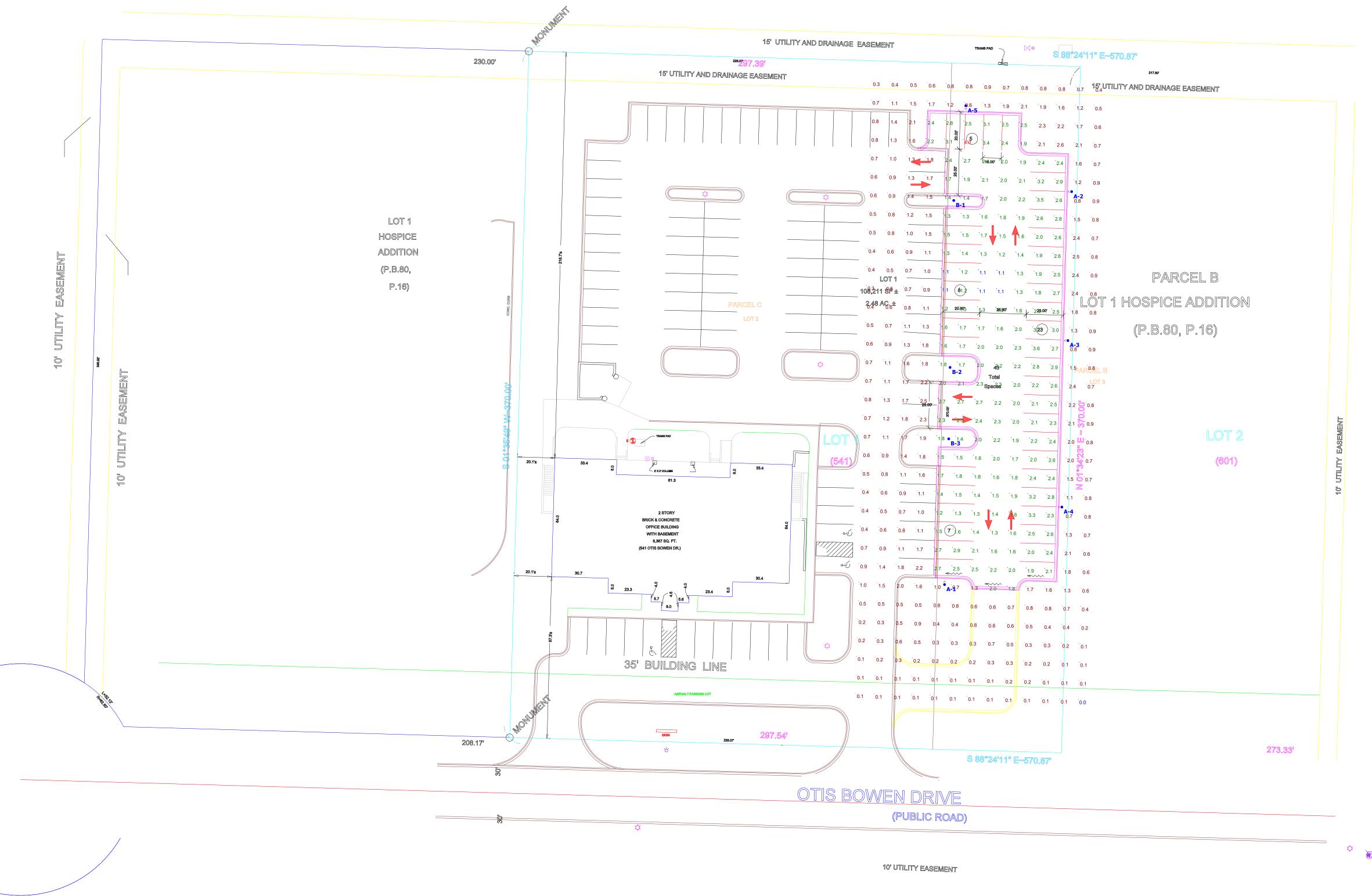




Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
^ •	A	5	Sternberg Lighting		Main Street Series, MS805 Post Top, Type 3 Optic, Clear Acrylic	82 LEDs	1	MS805_LED- 4A1R45T3-MD_05- CA.IES	9220	0.95	142.7
0	В	3	Sternberg Lighting		MAIN STREET Series, Post Top, Type 5 Optic, Clear Acrylic Lens	82 LEDS	1	MS805_LED- 4A1R45T5-MD_05- CA.IES	9974	0.95	141.8

StatisticsDescriptionSymbol Avg Max Min Max/Min Avg/MinCalc Zone Entire Area+ 1.4 fc 4.0 fc 0.0 fc N/A N/ACalc Zone New ParkingX 2.0 fc 4.0 fc 1.1 fc 3.6:1 1.8:1

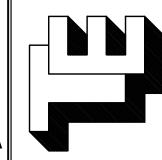




Plan View
Scale - 1" = 30ft

Designer
D. MIROW
Date
02/19/2020
Scale
Scale as shown
Drawing No.

Summary

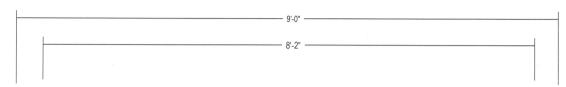


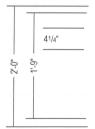
SHEET

1 OF 1

NEW FACE for Existing Single Face Non-Illuminated Monument Sign

scale: 1"=1'-0



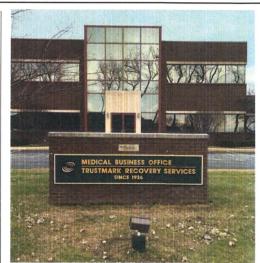




SIGN SPECIFICATIONS:

Ext. pld Alunianum copy

(1) NEW .125" FLAT ALUMINUM BACKER PANEL PAINTED WHITE WITH 1/4" FLAT OUT OUT LETTERS AND LOGO COLORS TO MATCH PMS 208 BURGUNDY AND PMS 654 DARK BLUE AS SHOWN



BEFORE



AFTER



OFFICE: 219.464.0420 FAX: 219.464.0490

555 Eastport Centre Drive

Suite D

Valparaiso, IN 46383

DRAWING NUMBER:

LY-0619-1B

COMMUNITY
HEALTHCARE SYSTEM®
Patient Financial Services

MUNSTER, IN

CLIENT APPROVAL:

LANDLORD APPROVAL:

ICU SALES REP.: LARRY YURKO REVISIONS:

SCALE: 1"=1'-0"

541 OTIS BOWEN DRIVE

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DESIGNER: JEFF FOGG DATE: 1.14.20

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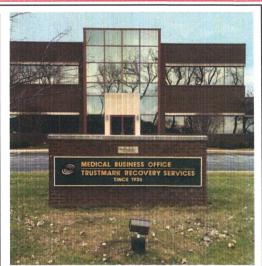
#### Aerial Plan View

Scale: NTS









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LY-0619-PLAN

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Patient Financial Services

CLIENT APPROVAL:

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ICU SALES REP.: LARRY YURKO REVISIONS:

SCALE: NTS

DATE: 1.14.20

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