



MH-10939 -

RIM = 381.30

IE 24" RCP(NW&SE) = 370.28

IE Elliptical CMP

(Approx. 7.9' Wide x 5.7' Tall)

**SCALE 1" = 40'** 

Bearings are based on a survey by Morley & Associates, Inc.

as recorded in Instrument #2102R00022632

FL = 379.89 -

IE Elliptical CN

₩ide x 6.0' T

(Approx. 8

RIM = 379.97

- M&A cap found flush

calculated corner

0.16' N. & 0.10' W. of

IE 24" RCP(NW&SE) = 367.25

IE 18" RCP = 374.88

IE 24" RCP = 374.98

IE 12" RCP = 374.84

M&A cap found flush

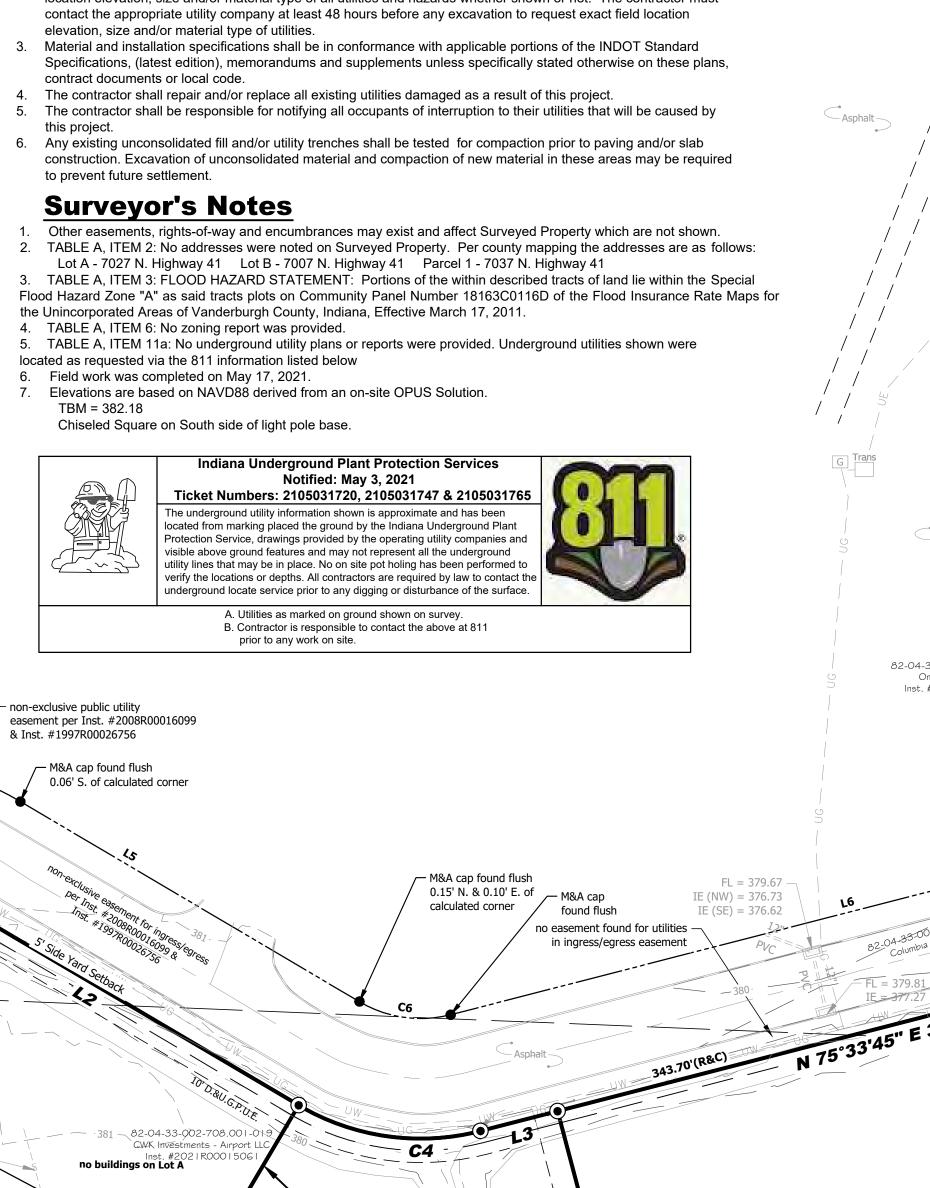
0.04' S. & 0.05' W.

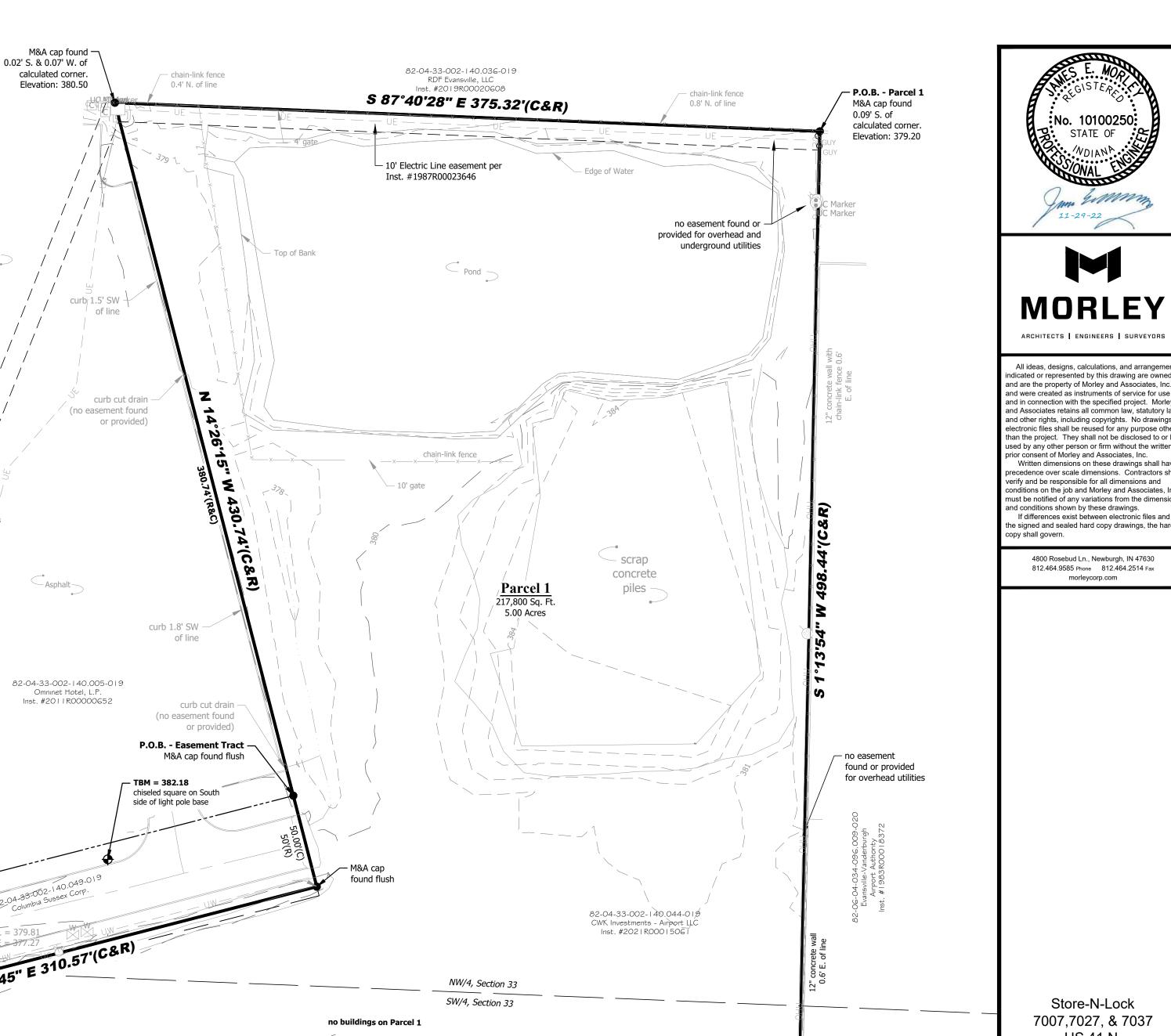
of calculated corner

## **General Notes** Contractor and materials shall comply with all local, state and federal codes, ordinances, rules, regulations, orders

- and other legal requirements of municipal authorities which bear on the performance of the work.
- The contractor is cautioned that the location, elevation, size and/or material type of existing utilities as shown on these plans is based on records of various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor is responsible for the accurate location elevation, size and/or material type of all utilities and hazards whether shown or not. The contractor must contact the appropriate utility company at least 48 hours before any excavation to request exact field location
- Material and installation specifications shall be in conformance with applicable portions of the INDOT Standard Specifications, (latest edition), memorandums and supplements unless specifically stated otherwise on these plans,
- Any existing unconsolidated fill and/or utility trenches shall be tested for compaction prior to paving and/or slab construction. Excavation of unconsolidated material and compaction of new material in these areas may be required to prevent future settlement.

- Other easements, rights-of-way and encumbrances may exist and affect Surveyed Property which are not shown.
- 2. TABLE A, ITEM 2: No addresses were noted on Surveyed Property. Per county mapping the addresses are as follows:
- Flood Hazard Zone "A" as said tracts plots on Community Panel Number 18163C0116D of the Flood Insurance Rate Maps for
- 4. TABLE A, ITEM 6: No zoning report was provided. 5. TABLE A, ITEM 11a: No underground utility plans or reports were provided. Underground utilities shown were
- 6. Field work was completed on May 17, 2021.
- Elevations are based on NAVD88 derived from an on-site OPUS Solution.
- TBM = 382.18





L.A. R/W Limited Access Right-of-Way

P.O.C. Point Of Commencement

Record Dimension

Record Dimension per Title Commitment

P.O.B. Point Of Beginning

(T/W) Traveled Way

Measured Dimension

Fence Line

Flow Line

---- Right-of-way Line

Property Boundary Line

Overhead Communcation

Underground Communication

5/8" Rebar with cap stamped

"Morley ID#0023" (Set)

Monument found as noted

Overhead Electric

Overhead Utilities

Underground Gas

**Underground Water** 

Underground Electric

Communication Junction Box

Fire Hydrant

Sign

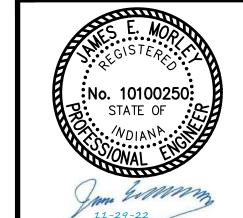
Utility Pole

Water Meter

Water Valve

Utility Pole with Drop

**Utility Pole Transformer** 





All ideas, designs, calculations, and arrangeme ndicated or represented by this drawing are owned by and are the property of Morley and Associates, Inc and were created as instruments of service for use and in connection with the specified project. Morley and Associates retains all common law, statutory la and other rights, including copyrights. No drawings o electronic files shall be reused for any purpose other than the project. They shall not be disclosed to or b used by any other person or firm without the writter prior consent of Morley and Associates, Inc. Written dimensions on these drawings shall have precedence over scale dimensions. Contractors sha verify and be responsible for all dimensions and onditions on the job and Morley and Associates, Ir must be notified of any variations from the dimen and conditions shown by these drawings. If differences exist between electronic files and

> 4800 Rosebud Ln., Newburgh, IN 47630 812.464.9585 Phone 812.464.2514 Fax morleycorp.com

Store-N-Lock 7007,7027, & 7037 US 41 N.

Civil

**Existing Conditions** Ву Date

Revisions **Scale:** 1" = 40' 11586.4.001-E

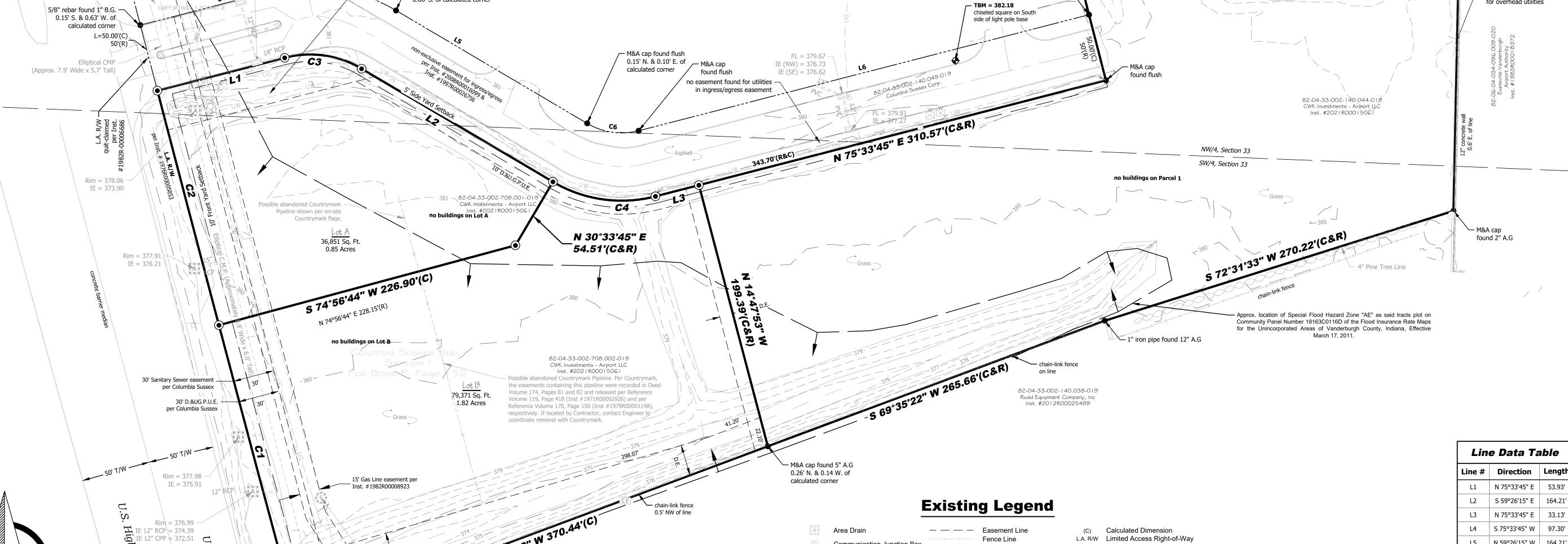
11-29-2022 KJL 11586 - Civil Base

Curve # Delta Radius Length Tangent Chord Length Chord Bearing N 14°58'07" W N 14°43'19" W 58.90' 31.07' S 81°56'15" E 45°00'00" | 75.00' S 81°56'15" E C-100 45°00'00" | 125.00' | 98.17' 51.78' N 81°56'15" W 95.67' 45°00'01" 50.00' 39.27' 20.71' S 81°56'15" E

Curve Data Table

L5 N 59°26'15" W 164.21'

L6 N 75°33'45" E 343.70'



### **General Notes**

- 1. Contractor and materials shall comply with all local, state and federal codes, ordinances, rules, regulations, orders and other legal requirements of municipal authorities which bear on the performance of the work.
- 2. The contractor is cautioned that the location, elevation, size and/or material type of existing utilities as shown on these plans is based on records of various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor is responsible for the accurate location elevation, size and/or material type of all utilities and hazards whether shown or not. The contractor must contact the appropriate utility company at least 48 hours before any excavation to request exact field location elevation, size and/or material type of utilities.
- 3. Material and installation specifications shall be in conformance with applicable portions of the INDOT Standard Specifications, (latest edition), memorandums and supplements unless specifically stated otherwise on these plans, contract documents or local code.
- 4. All pipe lengths are measured center of structure to center of structure. Pipes ending in flared end sections shall be measured to the end of the pipe.
- 5. Design pipe slopes are calculated from the center of structure to the center structure, or end of pipe for flared end sections. Construction pipe slopes may vary slightly if the structure cross slope does not match the design pipe slope. Flared end section slopes shall match design pipe slopes.
- 6. The contractor shall repair and/or replace all existing utilities damaged as a result of this
- 7. The contractor shall be responsible for notifying all occupants of interruption to their utilities that will be caused by this project.
- 8. Areas exposed by excavation or stripping and on which subgrade preparations are to be performed shall be scarified to minimum depth of 8" and compacted to minimum of 95% of optimum density, in accordance with ASTM D 698 (or 92% of optimum density, in accordance with ASTM D 1557), at a moisture content of not less than 1% below and not more than 3% above the optimum moisture content. These areas shall then be proofrolled to detect any areas of insufficient compaction, soft and yielding material. Proofrolling shall be accomplished by making a minimum of two (2) complete passes with a fully-loaded tandem-axle dump truck, or approved equivalent, in each longitudinal and perpendicular directions under the supervision and direction of a field geotechnical engineer. Areas of failure shall be excavated and re-compacted as stated above.
- 9. Fill materials used in preparation of subgrade shall be placed in lifts or layers not to exceed 8" loose measure and compacted to a minimum density of 95% of optimum density, in accordance with ASTM D 698, (or 92% of the optimum density, in accordance with ASTM D 1557) at a moisture content of not less than 1% below and not more than 3% above the optimum moisture content.
- 10. All dirt work graded slopes to be no greater than 4:1, unless otherwise noted on these
- 11. Any existing unconsolidated fill and/or utility trenches shall be tested for compaction prior to paving and/or slab construction. Excavation of unconsolidated material and compaction of new material in these areas may be required to prevent future settlement.
- 12. Part of the within described tract of land lies within that special Flood Zone AE as said tracts plots on Community Panel No. 180256 0128 D, being Map No. 18163C0116D of the Flood Insurance Rate Maps for Vanderburgh County, Indiana, dated March 17, 2011.

MH-10939 -

RIM = 381.30

IE 24" RCP(NW&SE) = 370.28

= 372.31

IE Elliptical CMP

(Approx. 7.9' Wide x 5.7' Tall)

5/8" rebar found 1 B.G.

(Approx. 7.9' Wide x 5.7' Tall)

0.15' S. & 0.63' W. of

calculated corner

Elliptical CMP

Rim = 378.06IE = 373.90

> Rim = 377.91IE = 376.21

> > 30' Sanitary Sewer easement

Rim = 377.98

IE = 375.91

IE Elliptical CN

► Wide x 6.0' Tal

(Approx. 8.

Rim = 376.99 -

IE 12" RCP = 374.39 

Bearings are based on a survey by Morley & Associates, Inc.

as recorded in Instrument #2102R00022632

per Columbia Sussex

30' D.&UG.P.U.E. per Columbia Sussex

### **Site Grading Guidelines**

- Preferred minimum pavement slope = 0.5% flow.
- Slope entrance/exit to public streets with curb and gutter to drain into the street. Slope entrance/exit to public streets without curb and gutter to drain away from the street.
- All surfaces shall be graded to drain. Local, state, and national laws and guidelines shall take precedence over design information if in conflict. Contractor shall inform client and Morley and Associates, Inc. in writing if any conflicts arise.
- Ramps shall be equipped with handrails on both sides if the rise is greater than six inches or if the ramp's length is greater than six feet. Maximum cross slopes shall be 1:50 (2.0%).
- 7. Changes in level 1/4 in. or less may be vertical without edge treatment. Changes in level between 1/4 in. and 1/2 in. shall be beveled with a slope no greater than 1:2. Changes in level greater than 1/2 in. shall incorporate a "ramp". Maximum slope on ramp shall be 1:12.
- 8. Landings shall be incorporated in ramps so that the maximum vertical rise between landings is no greater than 30 inches. Landings shall be a minimum of 60 inches in length and as wide as the ramp (36 inches min.)
- Landings at a change in direction shall be 60 inches wide and 60 inches long (minimum).
- 10. Maximum slope in an ADA parking space and its aisle shall be 1:50 (2%). 11. All areas of new facilities and altered portions of existing facilities shall comply with the Americans with Disabilities Act (ADA) Accessibility Guidelines.
- **Storm Drainage Maintenance**

Perennial Rye per 100 square feet.

M&A cap found flush

0.04' S. & 0.05' W.

of calculated corner

FL = 379.89 -

IE 18" RCP = 374.88

IE 24" RCP = 374.98

S IE 12" RCP = 374.84

L = 380.05 -

TE = 375.96

The individual lot owner(s) shall be responsible, including financially, for maintaining that part of the storm water drainage system and its easements which exist on his or her property in proper working order including:

- 1. Mowing grass, controlling weeds and maintaining the designed cover of the waterways, storage basins, and easements in accordance with applicable
- ordinances. Keeping all parts of the storm water drainage system operating as designed and constructed; and free of all trash, debris, and obstructions to the flow of water.
- 3. Maintaining that part of the storm water drainage system which lies on his or her property in accordance with the conditions described on the approved street and/or drainage plans on file in the County Surveyor's Office; and in compliance
- with the County Drainage Ordinance. Preventing all persons or parties from causing any unauthorized alterations, obstructions, or detrimental actions from occurring to any part of the storm water
- drainage system and easement which lies on his or her property Proposed seed mixture to include 6.5 lbs of Kentucky 31 Fescue and 1.5 lbs of

8" PVC @ 1.00% Min

15' Gas Line easement per

- M&A cap found flush 0.16' N. & 0.10' W. of

calculated corner

RIM = 379.97

IE 24" RCP(NW&SE) = 367.25

non-exclusive public utility

& Inst. #1997R00026756

easement per Inst. #2008R00016099

- M&A cap found flush

0.06' S. of calculated corner

8" PVC Pipe RD101 RD106 RD109 10" PVC Pipe

- M&A cap found flush

calculated corner

Emergency Overflow

(See Details)

0.15' N. & 0.10' E. of \_\_\_\_\_M&A cap

EP: 380.26

found flush

no easement found for utilities -

in ingress/egress easement

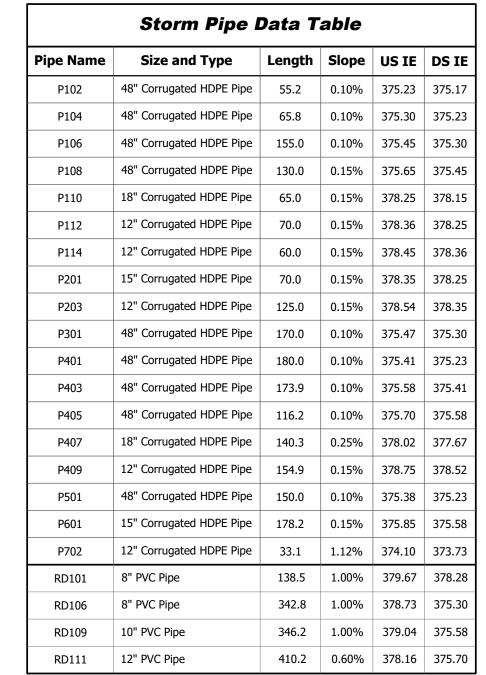
FL = 379.67 -

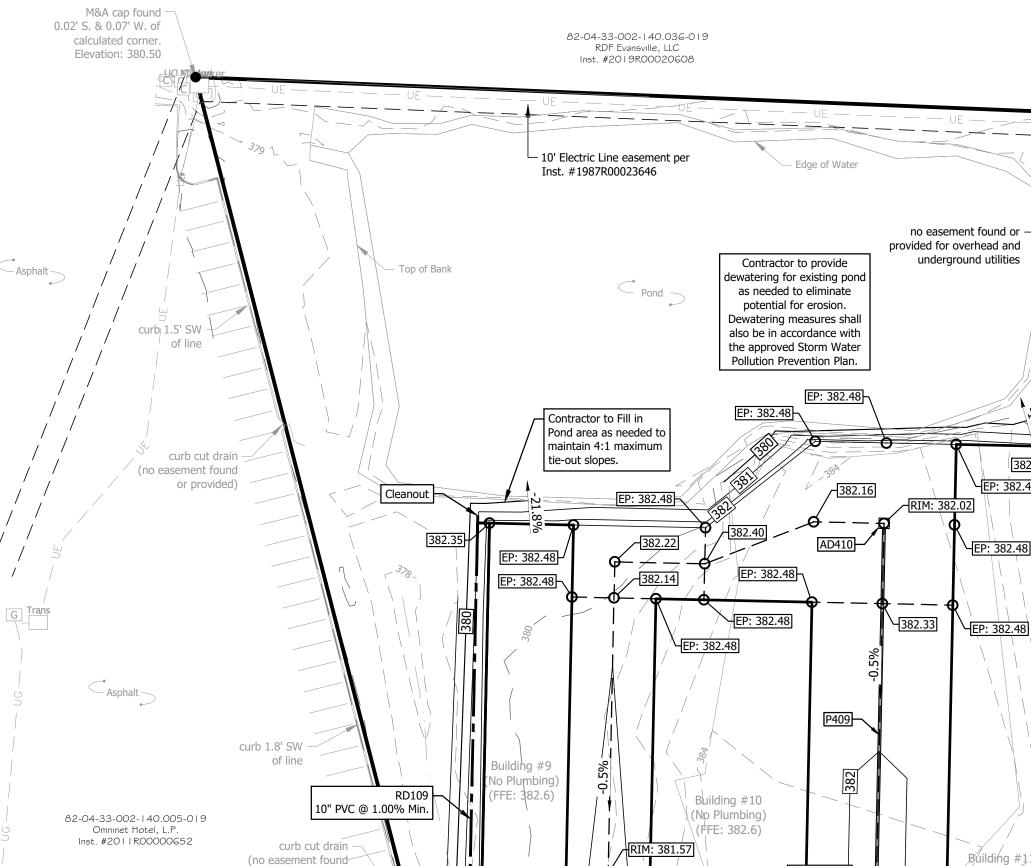
0.26' N. & 0.14 W. of

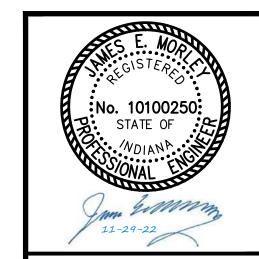
calculated corner

IE (NW) = 376.73

IE (SE) = 376.62







— P.O.B. - Parcel 1

M&A cap found

calculated corner.

Elevation: 379.20

12" PVC @ 0.60% Min.

no easement

M&A cap found 2" A.G

Invert Elevation | AD / MH = Rim

381.80

381.24

381.74

381.79

381.94

382.03

381.96

380.98

381.61

381.36

381.62

381.68

382.02

381.55

381.57

-

-

382.29

382.20

375.23

375.30

375.45

375.65

378.25

378.45

378.35

378.54

375.47

375.41

375.58

378.02

378.75

375.38

375.85

375.17

373.73

374.10

378.36

375.70

found or provided

for overhead utilities

(No Plumbii

EP: 382.48

₩P407

Approx. location of Special Flood Hazard Zone "AE" as said tracts plot on Community Panel Number 18163C0116D of the Flood Insurance Rate Maps for the Unincorporated Areas of Vanderburgh County, Indiana, Effective March 17, 2011.

Description

Area Drain

48" Flared End Section

12" Flared End Section

12" Flared End Section

Manhole

Manhole

**Storm Structure Data Table** 

EP: 382.48

NW/4, Section 33 SW/4, Section 33

AD103

AD105

AD107

AD109

AD111

AD115

AD202

AD204

AD302

AD402

AD404

AD408

AD410

AD502

AD602

FES101

FES701

FES703

MH113

0.09' S. of



All ideas, designs, calculations, and arrangeme ndicated or represented by this drawing are owned by and are the property of Morley and Associates, In nd were created as instruments of service for use and in connection with the specified project. Morley and Associates retains all common law, statutory la and other rights, including copyrights. No drawings o electronic files shall be reused for any purpose other than the project. They shall not be disclosed to or b used by any other person or firm without the writter rior consent of Morley and Associates. Inc. Written dimensions on these drawings shall have recedence over scale dimensions. Contractors sha verify and be responsible for all dimensions and nditions on the job and Morley and Associates, Ir must be notified of any variations from the dimen and conditions shown by these drawings. If differences exist between electronic files and ne signed and sealed hard copy drawings, the har

> 4800 Rosebud Ln., Newburgh, IN 47630 812.464.9585 Phone 812.464.2514 Fax morleycorp.com

py shall govern.

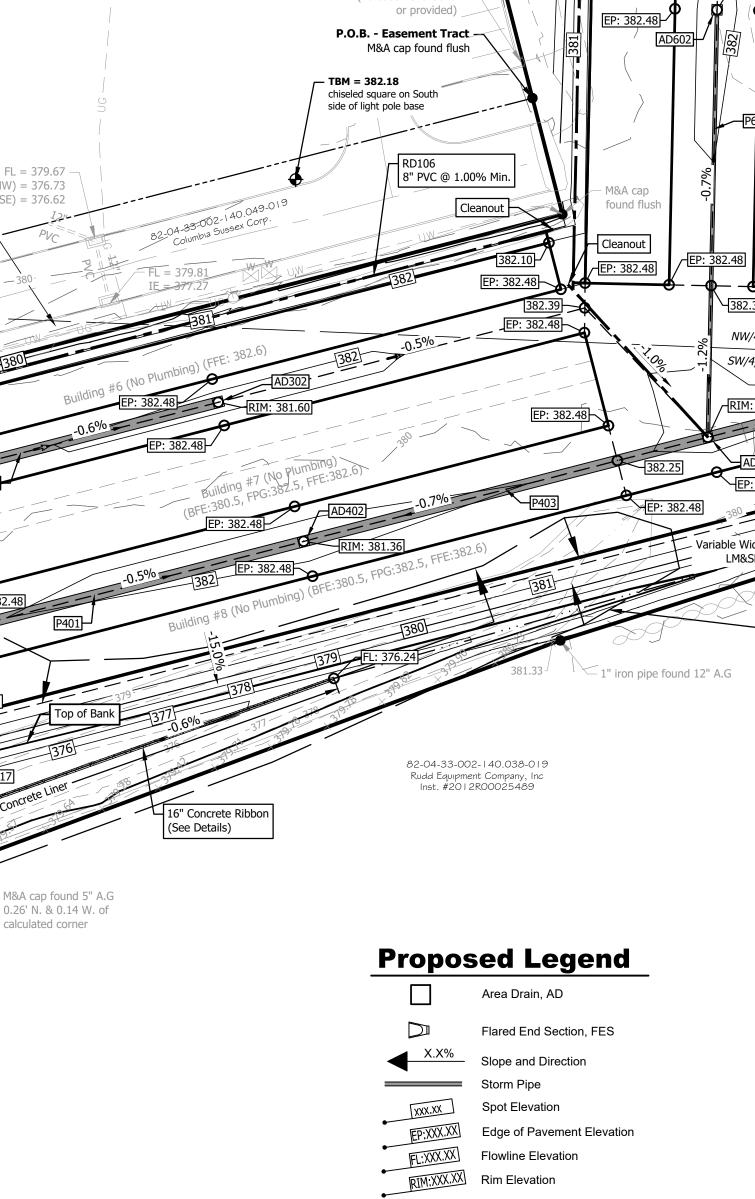
Store-N-Lock 7007,7027, & 7037 US 41 N.

Civil

Grading and Drainage Plan Ву Date Revisions **Scale:** 1" = 40'

11586.4.001-11-29-2022 KJL

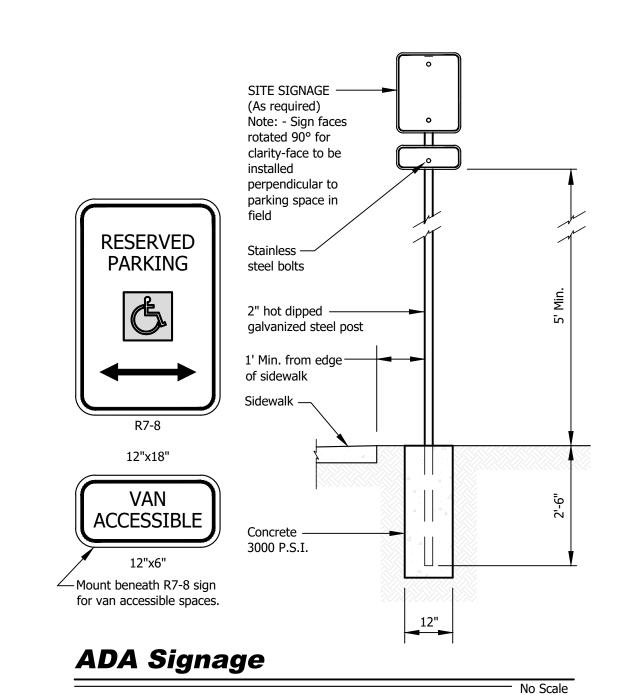
11586 - Civil Base

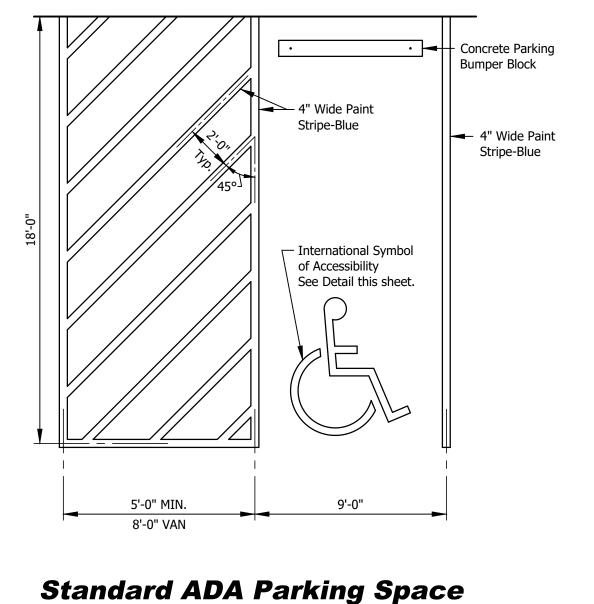


— — — Grade Break Line

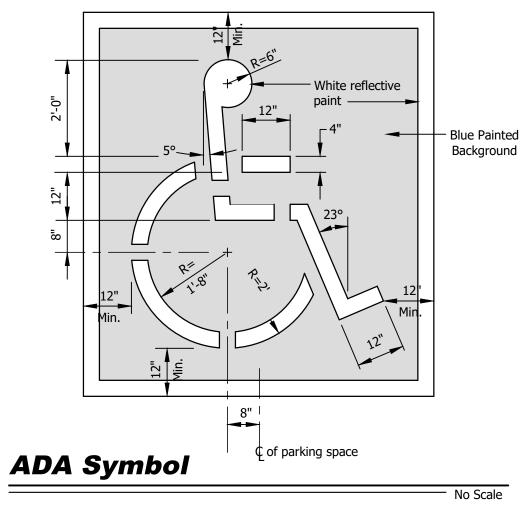
- 1. All areas of new facilities and altered portions of existing facilities shall comply with the American with Disabilities Act (ADA) Accessibility Guidelines.
- 2. Contractor and materials shall comply with all local, state and federal codes, ordinances, rules, regulations, orders and other legal requirements of municipal authorities which bear on the performance of the work.
- 3. Material specifications shall be in conformance with applicable portions of the state highway standard specifications, (latest edition) unless specifically stated otherwise on these plans, contract documents or local code.
- 4. Install detectable warning element paver/tile per manufactures specifications.
- 5. <u>Detectable Warning Elements on Walking Surfaces</u>: The material used to provide contrast should contrast by as least 70%. Contrast in percent is determined by: "Contrast =  $[(B_1-B_2)/B_1] \times 100$ " where  $B_1$  = light reflectance value (LRV) of the lighter area and  $B_2$  = light reflectance value (LRV) of the darker area. Note that in any application both white and black are never absolute; thus  $B_1$  never equals 100 and  $B_2$  is always greater than 0.
- 6. Maximum slope for ADA accessible route shall be 1:20 (5.0%). The minimum clear width shall be 36 inches.
- 7. Slopes greater than 1:20 shall be considered a ramp.
- 8. Maximum slope for a ramp shall be 1:12 (8.33%). The ramp length shall not exceed 30
- 9. Ramps shall be equipped with handrails on both sides if the rise is greater than 6 inches or if the ramps length is greater than 6 feet.
- 10. Maximum cross slopes shall be 1:50 (2.0%).
- 11. Landings shall be incorporated in ramps so that the maximum vertical rise between landings is no greater than 30 inches.
- 12. Landings shall be a minimum of 60 inches in length and as wide as the ramp (36 inches minimum). Landings at a change in direction shall be 60 inches wide and 60 inches long (minimum).
- 13. Maximum slope in an ADA parking space and its aisle shall be 1:50.

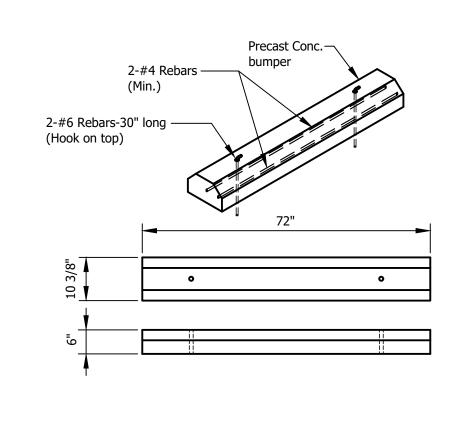
# **ADA Accessibility Guidelines**





\_o<del>\_</del> ADA Parking Sign





Concrete Wheelstop Detail

FOR ADA UNITS, (IF PROVIDED) PROVIDE 1:12 RAMP FROM RECESS TO FINISHED FLOOR OVER 18" RUN.

----- 4" (ACTUAL) CONCRETE SLAB-ON-GRADE
WITH 6x6 W1.4xW1.4 WWF OVER 10 MIL

— 4" COMPACTED AGGREGATE

— #4 BAR @ 5'-0" O.C.

— (2) #4 BAR LONGITUDINAL

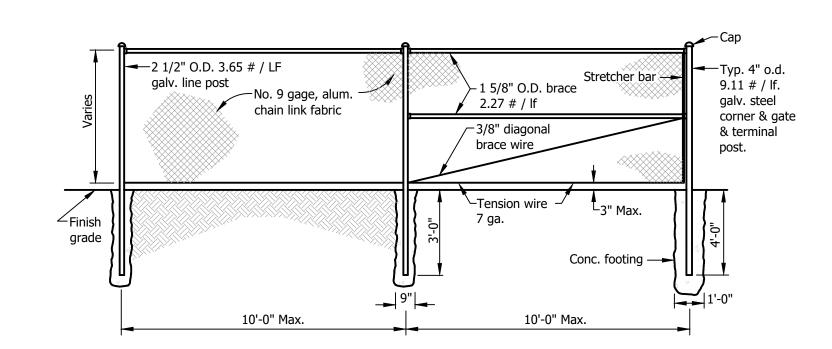
— CONSTRUCTION JOINT

- UNDISTURBED EARTH

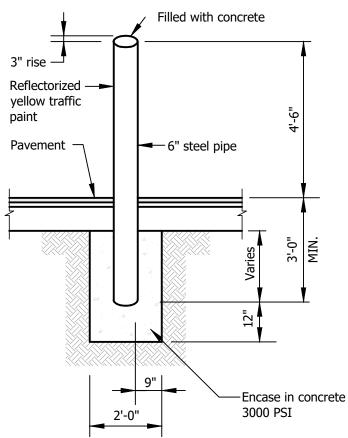
— (2) #4 BAR LONGITUDINAL

PERIMETER FOUNDATION

4800 Rosebud Ln., Newburgh, IN 47630

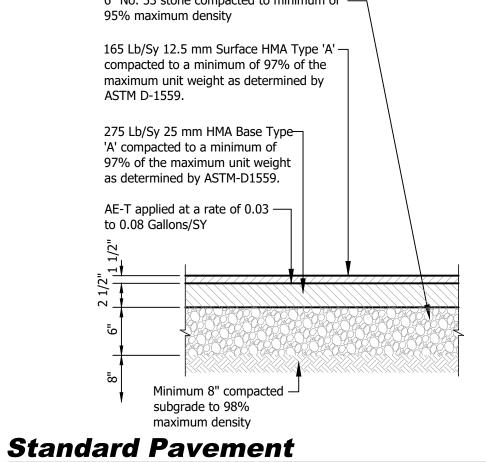


# Chain Link Fence Detail



Typical Bollard Detail

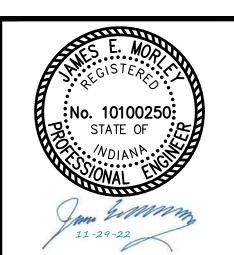
6" No. 53 stone compacted to minimum of 95% maximum density ASTM D-1559. 'A' compacted to a minimum of 97% of the maximum unit weight as determined by ASTM-D1559. AE-T applied at a rate of 0.03 to 0.08 Gallons/SY Encase in concrete3000 PSI Minimum 8" compacted



No Scale



9 1/4" THRESHOLD





All ideas, designs, calculations, and arrangeme ndicated or represented by this drawing are owned by and are the property of Morley and Associates, Inc and were created as instruments of service for use and in connection with the specified project. Morley and Associates retains all common law, statutory law and other rights, including copyrights. No drawings o electronic files shall be reused for any purpose other than the project. They shall not be disclosed to or b used by any other person or firm without the writter orior consent of Morley and Associates, Inc. Written dimensions on these drawings shall have precedence over scale dimensions. Contractors sha verify and be responsible for all dimensions and onditions on the job and Morley and Associates, Ir must be notified of any variations from the dimen and conditions shown by these drawings. If differences exist between electronic files and ne signed and sealed hard copy drawings, the har

> 812.464.9585 Phone 812.464.2514 Fax morleycorp.com

Store-N-Lock 7007,7027, & 7037 US 41 N.

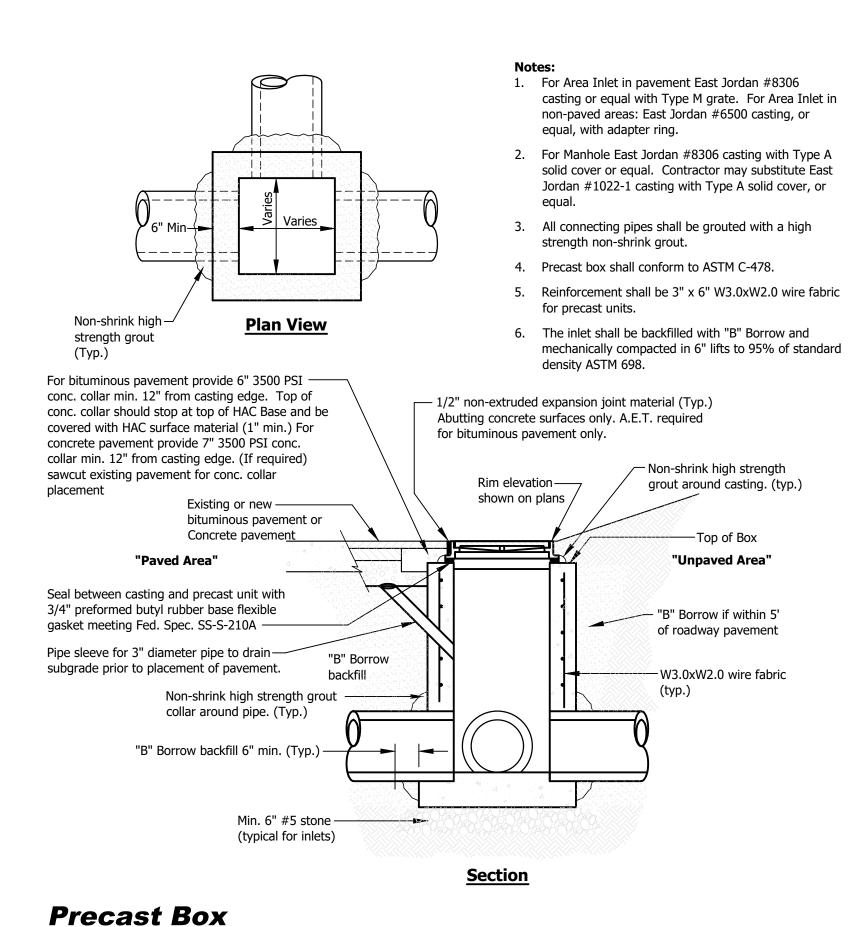
> Civil Site Details

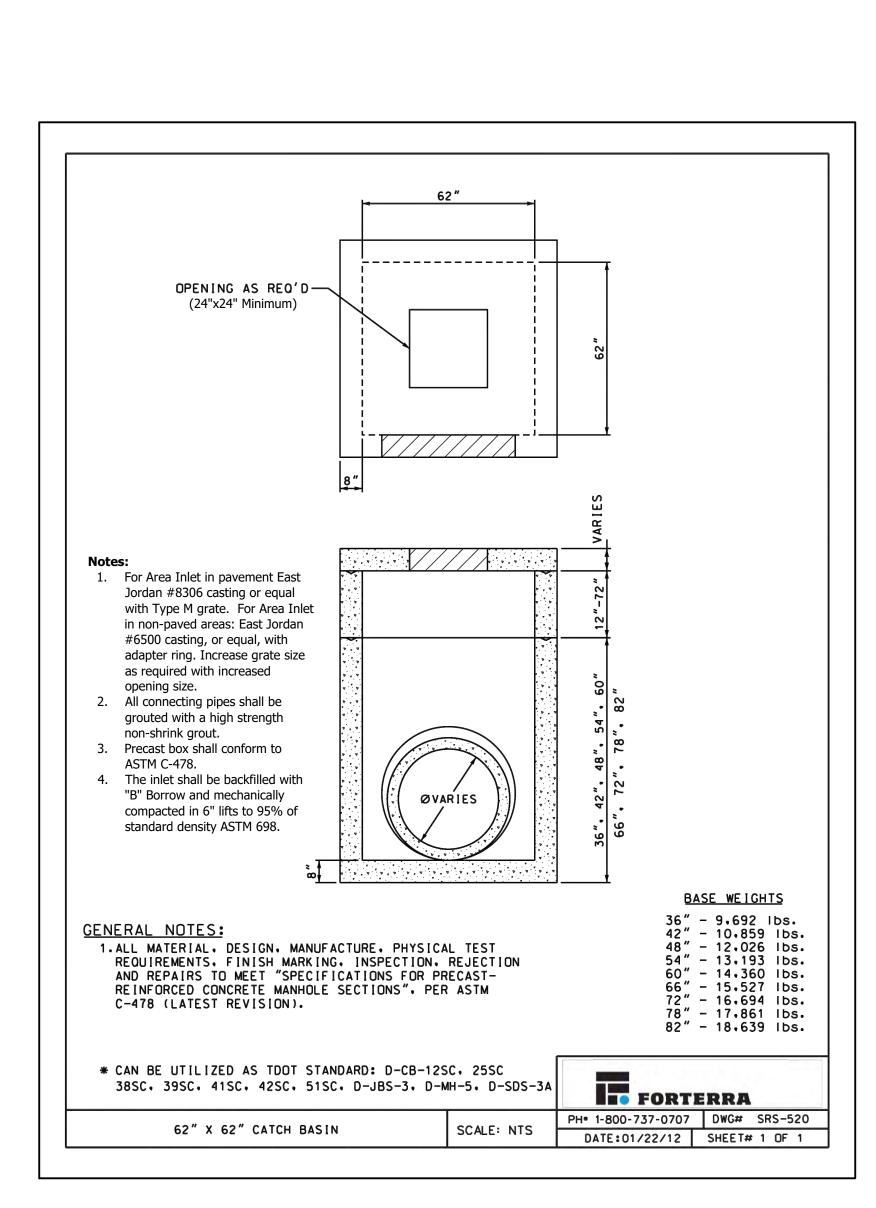
).	Ву	Date		
Revisions				
Scale: As Noted				

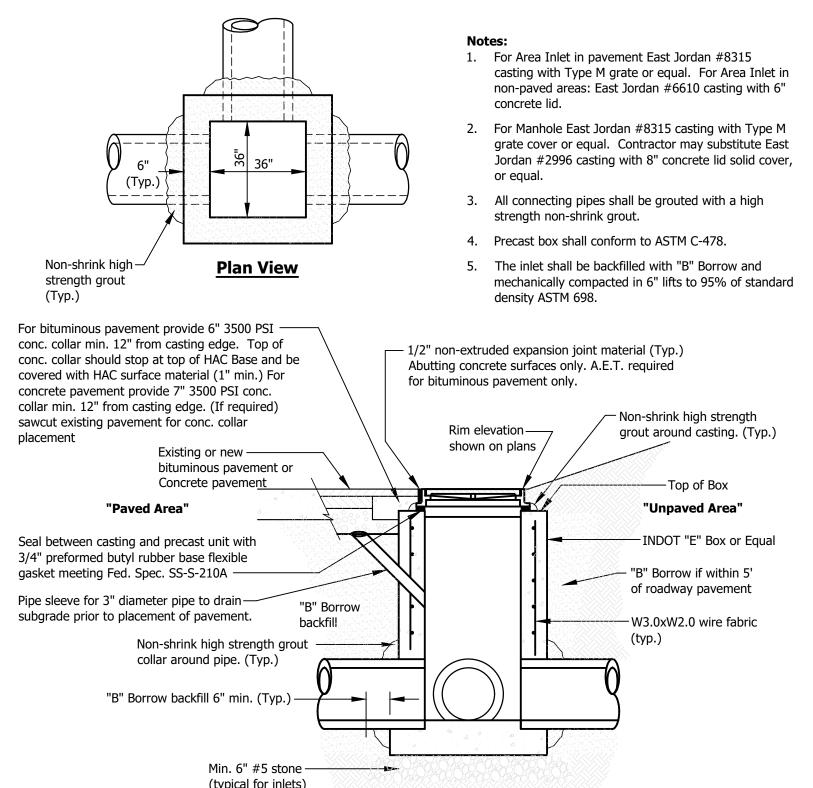
Job Number: 11586.4.001-E 11-29-2022

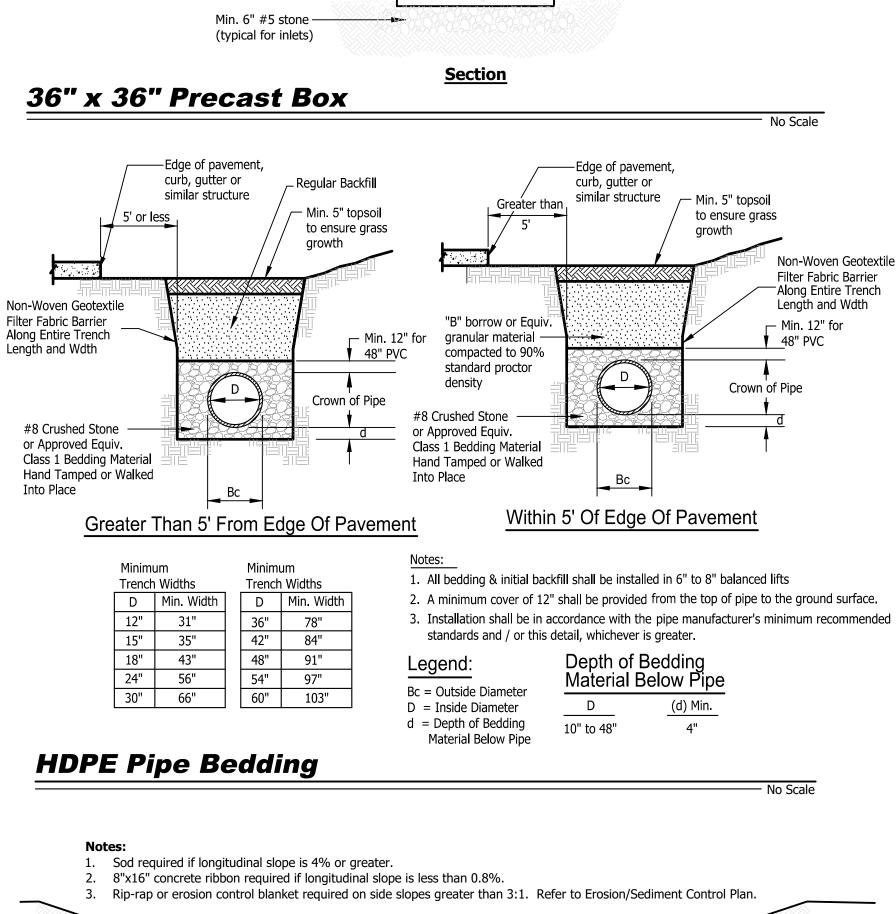
11586 - Civil Base

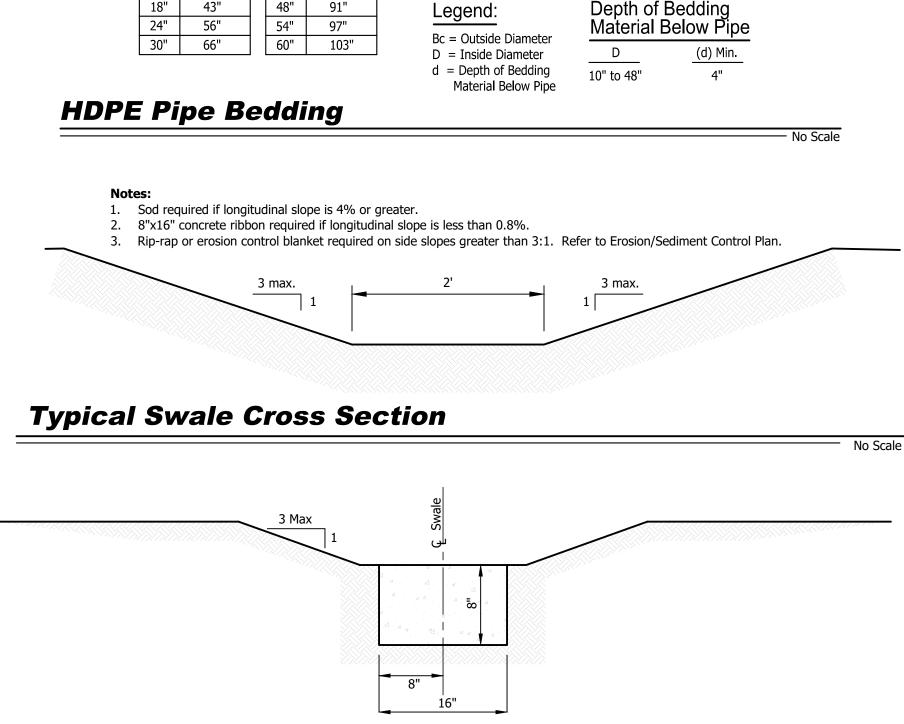
C-500



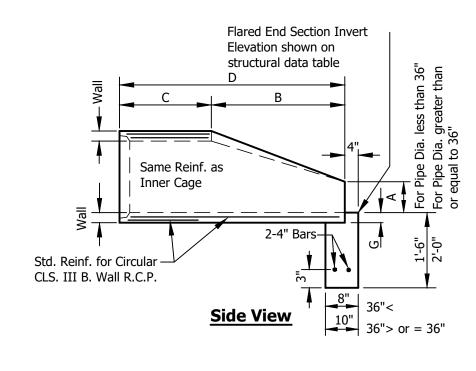


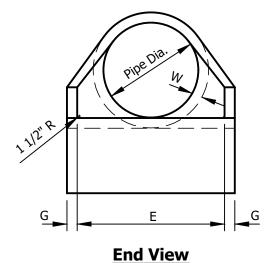






Typical Concrete Ribbon Swale Cross Section





All bedding & initial backfill shall be Installed in 6" to 12" balanced lifts. A minimum 9" of clearance shall be provided on each side of the installed

STATE OF

**MORLEY** ARCHITECTS | ENGINEERS | SURVEYORS All ideas, designs, calculations, and arrangeme

dicated or represented by this drawing are owned b and are the property of Morley and Associates, In nd were created as instruments of service for use and in connection with the specified project. Morle and Associates retains all common law, statutory la and other rights, including copyrights. No drawings lectronic files shall be reused for any purpose other than the project. They shall not be disclosed to or I used by any other person or firm without the writter ior consent of Morley and Associates. Inc. Written dimensions on these drawings shall have ecedence over scale dimensions. Contractors sh erify and be responsible for all dimensions and ditions on the job and Morley and Associates, I nust be notified of any variations from the dimer nd conditions shown by these drawings. If differences exist between electronic files and e signed and sealed hard copy drawings, the ha py shall govern.

> 4800 Rosebud Ln., Newburgh, IN 47630 812.464.9585 Phone 812.464.2514 Fax morleycorp.com

(LBS) 530 | 2 1/4" | 8" | 2'-1/4" | 4'-1 1/2" | 6'-1 3/4" | 1'-11 3/4" | 2 1/4" | 9" 8" 3'-0" 7'-6 1/2" 1'-9" 9'-3 1/2" 10'-0" 6 1/2"

**Concrete End Section** 

**Top View** 

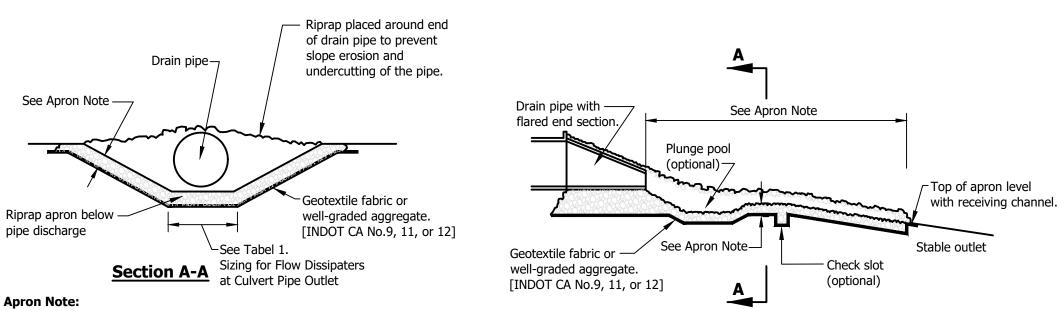
-NOTE: End Connection to

fit Pipe used.

1/2 D

– Min. 6" topsoil Min. 6" topsoil to ensure grass to ensure grass growth if not Edge of pavement, Edge of pavement, growth under pavement curb or sidewalk -Depth of Bedding curb or sidewalk **Material Below Pipe** 27" & Smaller Min. 1.25 Bc +12' Min. 1.25 Bc +12' 30" to 60" 66" & Larger Soil backfill "B" borrow or Equiv. Bc = Outside Diameter granular material —Note: D = Inside Diameter compacted to 95% d = Depth of Bedding standard proctor "B" borrow or Equiv. Material Below Pipe granular material compacted to 90% standard proctor density All bedding & initial backfill shall be **Greater than 5' from** Beneath or within 5' of A minimum 9" of clearance shall be edge of pavement edge of pavement provided on each side of the installed

## Reinforced Concrete Pipe Storm Sewer Bedding (Circular and Elliptical)



**Apron Note:** • Length and width determined according to tailwater conditions

- Aligned straight with channel flow. If curve is necessary to align apron with the
- receiving stream, locate the curve in the upstream section of the apron. Plunge pool (used with higher velocity flows).
- 1.2 times the maximum stone diameter for a  $d_{50}$  stone size of 15 inches or larger. 1.5 times the maximum stone diameter for a  $d_{50}$  stone size of 15 inches or less.

Table 1. Sizing for Flow Dissipaters at Culvert Pipe Outlets					
Pipe Size	Average Riprap Diameter	Apron Width <sup>2</sup>	Apron Length <sup>3</sup>		
8 in.	3 in.	2 to 3 ft.	5 to 7 ft.		
12 in.	5 in.	3 to 4 ft.	6 to 12 ft.		
18 in.	8 in.	4 to 6 ft.	8 to 18 ft.		
24 in.	10 in.	6 to 8 ft.	12 to 22 ft.		
30 in.	12 in.	8 to 10 ft.	14 to 28 ft.		
36 in.	14 in.	10 to 12 ft.	16 to 32 ft.		

1 - For larger or higher flows consult a registered engineer. 2 - Apron width at the narrow end of apron (pipe or channel outlet). 3 - Select length taking into consideration the low flow (no pressure

head) or high flow (pressure head) conditions of the culvert pipe.

No Scale

Well-graded mixture of stone with 50 percent of the stone pieces, by weight, larger than the d<sub>50</sub> size and diameter of the largest stone equal

Size and gradation that will withstand velocities

of storm water discharge flow design.

Hard, angular, highly weather resistant.

Specific gravity of at least 2.5.

- 1. Divert surface water runoff around the structure during construction so that the site can be properly dewatered for foundation preparation.
- 2. Excavate foundation and apron area subgrades below design elevation to allow for thickness of the filter medium and riprap.
- Compact any fill used in subgrade preparation to the density of
- surrounding undisturbed soil material.
- 4. Smooth subgrade enough to protect geotextile fabric from tearing. Place geotextile fabric or aggregate bedding material (for stabilization and filtration) on the compacted and smoothed foundation.
- Blend riprap smoothly to surrounding grade. If the channel is well defined, extend the apron across the channel bottom and up the channel banks to an elevation of six inches above the maximum tailwater depth or the top of the bank, whichever is less.
- If geotextile fabric tears when placing riprap, repair immediately by laying and stapling a piece of fabric over damaged area, overlapping the undamaged areas be at least 12 inches.
- Construct a small plunge pool within the outlet apron. (Riprap aprons must be level with or slightly lower than the receiving channel and should not produce an overfall or restrict flow of the water conveyance structure.)

**Outlet Protection and Grade Stablilization** 

Civil **Grading and Drainage** 

Store-N-Lock 7007,7027, & 7037

US 41 N.

Details					
Ο.	Ву	Date			
Revisions					

Scale: As Noted

11586.4.001-11-29-2022 KJL

11586 - Civil Base

C-501

