AGENDA

ELKHART COUNTY PLAN COMMISSION

August 14, 2024 9:30A.M.

Public Service Building MEETING ROOMS A & B 4230 Elkhart, Rd., GOSHEN, INDIANA

Call to Order

Roll Call

Approval of the minutes of the last regular meeting of the Elkhart County Plan Commission held on the 10th day of July 2025.

Acceptance of the Elkhart County Development Ordinance, and Staff Report materials as evidence for today's hearings.

PRIMARY APPROVAL 9:30 A.M. (SNYDER)

A. Petitioner: Warner Farms (page 9)

represented by Innovative Communities, Inc.

Petition: for primary approval of a 6-lot major subdivision to be known as **ROCK**

POINTE SECOND.

Location: east side of CR 29, 2,140 ft. north of CR 34, in Elkhart Township.

(MA-0351-2025)

REZONING

B. Petitioner: Cesar Manuel Valdez (page 10)

Petition: for a zone map change from A-1 to B-2.

Location: east side of US 33, 1,260 ft. north of CR 40, common address of 65764 US 33

in Elkhart Township. (RZ-0444-2025)

DETAILED PLANNED UNIT DEVELOPMENTS

C. Petitioner: Conservative Business Concepts LLC (page 11)

represented by Abonmarche Consultants

Petition: for a zone map change from GPUD B-3 to DPUD B-3 and for primary

approval of a 1-lot minor subdivision to be known as **BROOKVIEW FARMS**

PHASE 1 DPUD B-3 AMENDMENT.

Location: northeast corner of Fernbrook Rd. & CR 142, west side of SR 15, common

address of 67470 Fernbrook Rd. in Jackson Township. (DPUD-0445-2025)

D. Petitioner: Igor Doroshenko & Nina Mamalat Doroshenko, (page 12)

Husband & Wife & Andriy Doroshenko & Katya Doroshenko, Husband &

Wife

represented by B. Doriot & Associates, Inc.

Petition: for a zone map change from A-1 to DPUD A-1 and for primary approval of

an 8-lot major subdivision to be known as *DOROSHENKO A-1 DPUD*.

Location: south side of CR 118, 1,700 ft. west of Old CR 17, in Concord Township.

(DPUD-0441-2025)

E. Petitioner: Fernbrook LLC (page 13)

represented by DVG Team, Inc.

Petition: for a zone map change from GPUD B-3 to DPUD B-3 and for primary

approval of a 1-lot minor subdivision to be known as NIPSCO NEW PARIS

LOCAL OPERATIONS CENTER.

Location: northwest corner of Fernbrook Rd. & CR 142, west of SR 15, common

address in Jackson Township. (DPUD-0352-2025)

PUBLIC MEETING ITEMS (time of review at the discretion of the Plan Commission)

STAFF/BOARD ITEMS (time of review at the discretion of the Plan Commission)

> Middlebury East TIF Expansion.

> South Benton TIF Expansion.

ADJOURNMENT

Phil Barker – County Surveyor: no term

Steven Edwards – Appointed by Commissioners: term 1/1/23 – 12/31/26

Steve Warner - Appointed by Commissioners: term 1/1/23 - 12/31/26

Lori Snyder - Appointed by Commissioners: term 1/1/25 - 12/31/28

Steven Clark – County Council Liaison: no term

Brad Rogers - County Commissioners Liaison: no term

Brian Dickerson – Appointed by Commissioners: term 1/1/22 – 12/31/25

Roger Miller – Appointed by Commissioners: term 1/1/25 – 12/31/28

Dan Carlson – Ag Agent: no term

PLAN MINUTES ELKHART COUNTY PLAN COMMISSION MEETING HELD ON THE 10TH DAY OF JULY 2025 AT 9:30 A.M. IN THE MEETING ROOM OF THE ADMINISTRATION BUILDING 117 N. 2ND ST., GOSHEN, INDIANA

1. The regular meeting of the Elkhart County Plan Commission was called to order by the Vice Chairman, Roger Miller. The following staff members were present: Jason Auvil, Planning Manager; Danny Dean, Planner; Danielle Richards, Planner; Laura Gilbert, Administrative Manager; Mae Kratzer, Plan Director, and Don Shuler Attorney for the Board.

Roll Call.

Present: Philip Barker, Steven Edwards, Steve Warner, Steve Clark, Brad Rogers, Brian Dickerson, Dan Carlson, Roger Miller.

Absent: Lori Snyder.

- 2. A motion was made and seconded (*Clark/Barker*) that the minutes of the last regular meeting of the Elkhart County Plan Commission, held on the 12th day of June 2025, be approved as submitted. The motion was carried with a unanimous vote.
- 3. A motion was made and seconded (*Warner/Edwards*) that the Elkhart County Zoning Ordinance and Elkhart County Subdivision Control Ordinance be accepted as evidence for today's hearings. The motion was carried with a unanimous vote.

It should be noted Brad Rogers arrives at this time

4. The application for a zone map change from A-1 to M-1, for Barbara Christine Wilhelm, Trustee of the Barbara Christine Wilhelm Lifetime Family Trust represented by Ryan White, on property located on the north and south sides of CR 23, west of Maple St., in Jefferson Township, zoned A-1, was presented at this time.

Danielle Richards presented the Staff Report/Staff Analysis, which is attached for review as *Case #RZ-0322-2025*.

Ryan White, Pinnacle Properties, 418 S. Main St., Elkhart, was present representing the petitioner. He stated there is no specific buyer or business requesting this rezoning. He explained that the reason for the rezoning is that most potential commercial property buyers need electrical power, and established commercial zoning. He also noted that potential buyers are operating under tight timelines and cannot afford uncertainty, making established zoning favorable. He emphasized that they do not have time to pursue a Planned Unit Development (PUD), which is why a straight rezoning is preferred. Brad Rogers asked, due to past issues with direct M-1 rezonings, about the many different manufacturing businesses that could go here, including a data center. Mr. White stated the data center is no longer under contract on the property. He mentioned he has spoken with other data center users, and there is an issue with securing the amount of power needed. He further stated that currently, no one is pursuing that property. Mr. Warner raised a concern about the straight rezoning, particularly because of Velmont. Mr. White inquired if it was due to the vibrations. He explained he thought that issue had been resolved, as a manager had told him three weeks ago that it had been taken care of. Mr. Clark expressed sympathy for Mr. White, in his struggle to attract future business endeavors to

PAGE 2 ELKHART COUNTY PLAN COMMISSION MEETING 7/10/25

Elkhart County. He pointed out that businesses don't want the investments and time involved to rezone when other properties are already zoned for their needs. Mr. Miller added that there are other properties currently for sale with M-1 zoning. Mr. White said they are looking for hundreds of acres. He compared prospective buyers to Samsung, which purchased land in St. Joseph County, because they have the land and power capability. Mr. Clark asked if the interested buyers are automobile manufacturing companies. Mr. White explained that there aren't many parcels of land adjacent to each other, making it difficult to acquire the amount needed for those companies. Mr. Dickerson expressed concern about the residential property in the middle of the rezoning. Mr. White mentioned hopes of them being bought out, similar to the owner to the north. Mr. Dickerson asked if it is the same owner. Mr. White clarified it was a different owner and added that Bristol still has the potential to build a bypass connecting Earthway Dr. and Stonemont Dr. Mr. Dickerson also stressed his concerns for the residential parcels remaining there. He said that if it were his backyard, he wouldn't want a negative impact on his property value. He clarified that the Board's goal is not to encircle residential properties with manufacturing zoning. He stated he's not fully against manufacturing zoning or even a straight rezone but wants to consider how it affects neighboring parcels and what buffering would look like. Mr. Dickerson stated the board has to balance supporting local business while protecting other taxpayers. He noted there's nowhere else to build in Elkhart County, which is a significant issue. Mr. White asked if it would be possible to set restrictions requiring enhanced buffers beyond the standard ordinances. Mr. Shuler said such restrictions don't come with a straight rezoning but could be included as commitments or through a DPUD. Mr. White suggested that local residents could be bought out at prices above market value. Mr. Dickerson expressed concern that the neighbors may not end up being bought out unless a requirement forced it.

There were no remonstrators present.

A motion was made and seconded (*Rogers/Dickerson*) that the public hearing be closed, and the motion was carried with a unanimous vote.

Mr. Warner agreed with Mr. Dickerson's concerns, and he is also looking out for the residents.

The Board examined said request, and after due consideration and deliberation:

Motion: Deny, **Moved by** Roger Miller, **Seconded by** Brad Rogers that the Advisory Plan Commission recommend to the Bristol Town Council that this request for a zone map change from A-1 to M-1 be denied in accordance with the Staff Analysis.

Vote: Motion carried by unanimous roll call vote (summary: Yes = 8).

Yes: Phil Barker, Steve Edwards, Steve Warner, Steve Clark, Brad Rogers, Brian Dickerson, Dan Carlson, Roger Miller.

Board of County Commissioners Approvals Following Plan Commission Recommendations

Jason Auvil reported on the June 16, 2025, Elkhart County Commissioners meeting petition approvals.

A motion was made and seconded (*Warner/Dickerson*) that the meeting be adjourned. The motion was carried with a unanimous vote, and the meeting was adjourned at 9:49 a.m.

PAGE 3 ELKHART COUNTY PLAN COMMISSION MEETING 7/10/25

Respectfully submitted,	
Amber Weiss, Recording Secretary	
D W.11 M. OI .	
Roger Miller, Vice-Chairman	

Plan Commission Staff Report

Prepared by the Department of Planning and Development

Hearing Date: August 14, 2025

Transaction Number: MA-0351-2025.

Parcel Number(s): 20-11-12-326-006.000-014, 20-11-12-400-001.000-014.

Existing Zoning: A-1.

Petition: For primary approval of a 6-lot major subdivision to be known as ROCK POINTE SECOND.

Petitioner: Warner Farms, represented by Innovative Communities, Inc.

Location: East side of CR 29, 2,140 ft. north of CR 34, in Elkhart Township.

Adjacent Zoning and Land Uses: The following table shows the zoning and current land use for the subject property and adjacent sites.

	Zoning	Current Land Use
Subject Property	A-1	Agricultural
North	A-1	Agricultural
South	A-1	Residential
East	A-1	Agricultural
West	A-1	Residential

Site Description: The subject property is the 36-acre final phase of Rock Pointe, which began with an original phase of 5 lots along CR 29. Rock Pointe Second contains 6 lots averaging 6 acres each, and the lots will access CR 29 via a private drive over a 40 ft. access easement. The only dedicated right-of-way will be the standard 40 ft. at CR 29. Lots 1 through 3 contain an existing drainage easement with tile running toward Hoover Ditch, and the owners of those lots will be subject to a proposed maintenance agreement for features within that easement. Existing slopes direct surface water generally toward depressions at the east sides of lots 3 and 4.

History and General Notes:

- > September 29, 2011 The original Rock Pointe was recorded.
- This major subdivision includes a 70 ft. lot width variance for proposed lot 1, a 30 ft. lot width variance for proposed lot 6, and no-frontage variances for proposed lots 2 through 5.

Staff Analysis: The staff, after reviewing this petition with the assistance of the Elkhart County Technical Committee, finds that this primary approval request meets the requirements of the Development Ordinance.

Staff therefore recommends APPROVAL of this primary.

MA-0351-2025

PLAN COMMISSION &

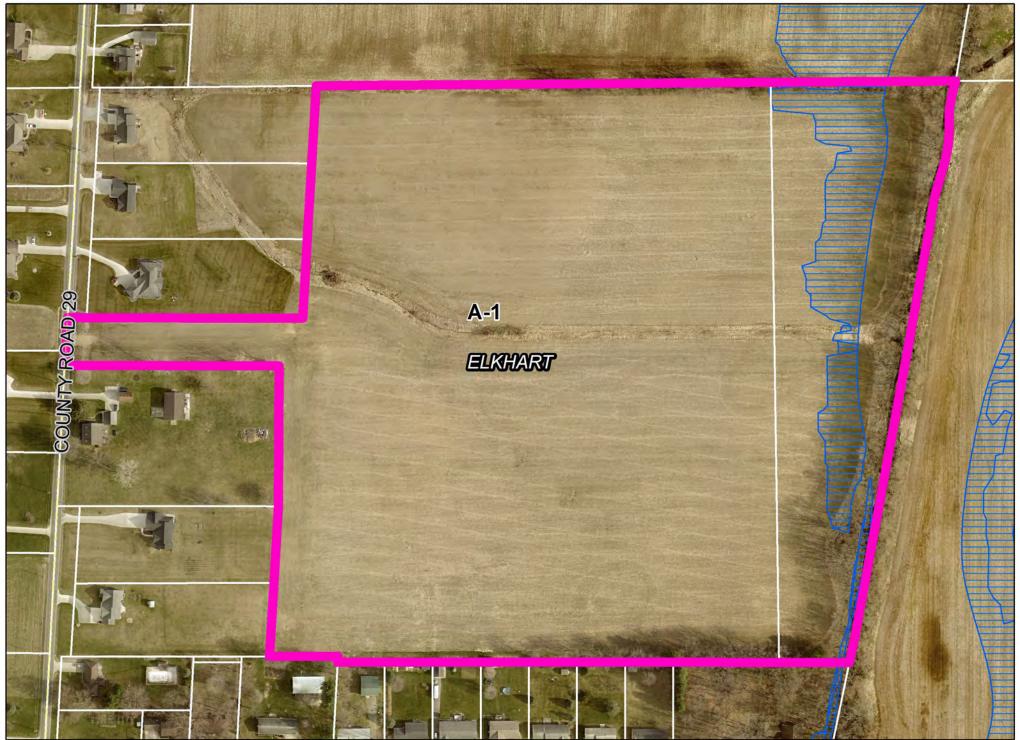
Elkhart County Planning & Development Public Services Building

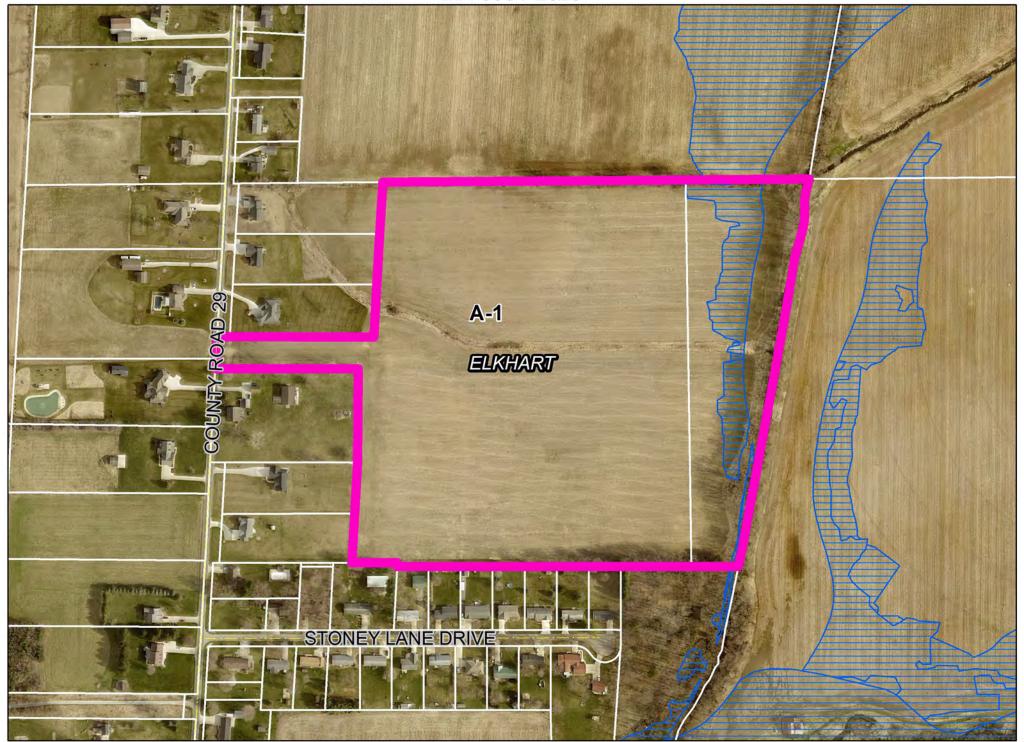
4230 Elkhart Road, Goshen, Indiana, 46526 Phone - (574) 971-4678 Fax - (574) 971-4578

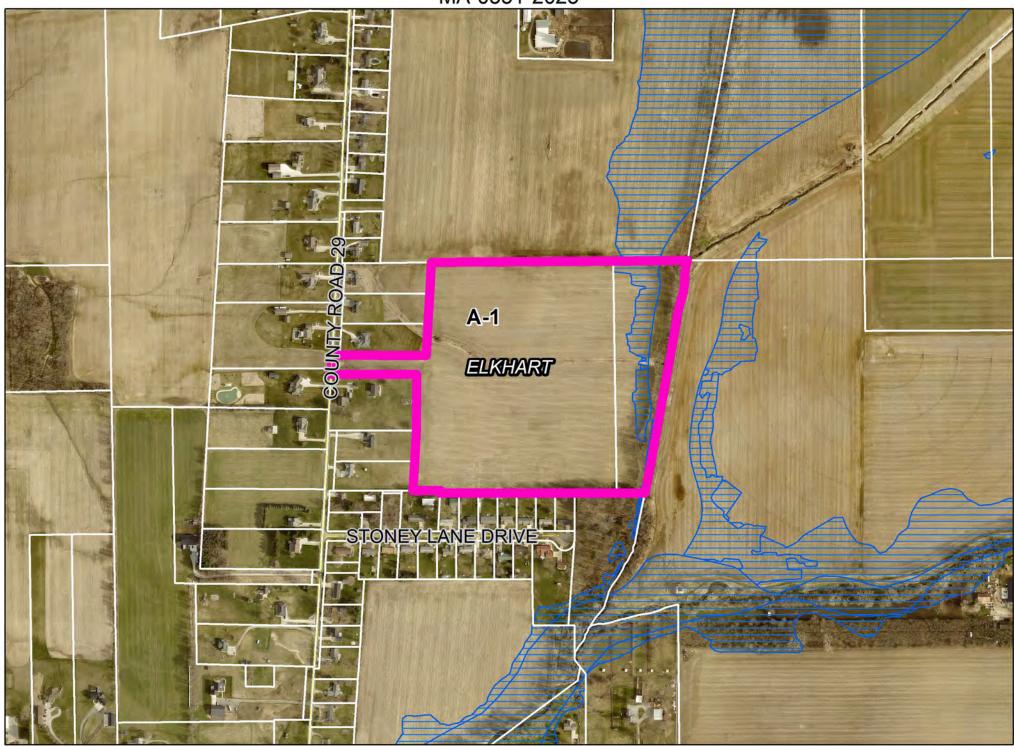
BOARD OF ZONING APPEALS

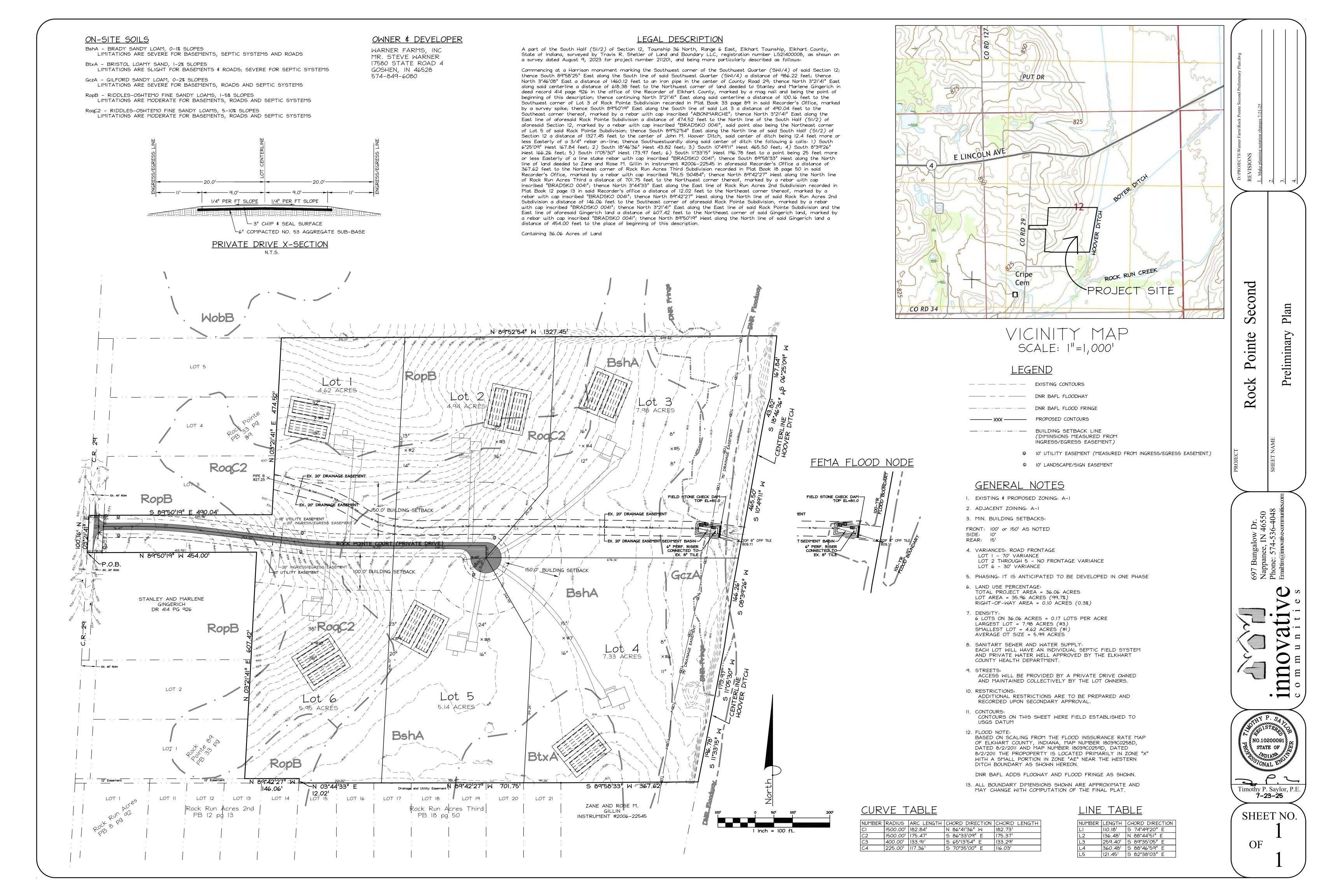
Major Subdivision - Primary

Doto: U2/3U//U/2 Mooting Doto:	st 14, 2025 Hearing (Subdivision) Transaction #: MA-0351-2025				
Description: for primary approval of a 6- lot major subdivision to be known as ROCK POINTE SECOND					
Contacts: Applicant Land Owner Innovative Communities, Inc Warner Farms 697 Bungalow Dr 17580 Sr 4 Nappanee, IN 46550 Goshen, IN 46528	Private Surveyor Innovative Communities, Inc 697 Bungalow Dr Nappanee, IN 46550				
Site Address: 00000 County Road 29 GOSHEN, IN 46528	Parcel Number: 20-11-12-326-006.000-014 20-11-12-400-001.000-014				
Township: Elkhart Location: EAST SIDE OF CR 29, 2,140 FT. N OF CR 34					
Subdivision:	Lot #				
Lot Area: Frontage:	Depth:				
Zoning: A-1	NPO List:				
Present Use of Property:					
Legal Description:					
Comments: for a Developmental Variance to allow for the construction of easement	a residence on property with no road frontage served by an access				
Applicant Signature:	Department Signature:				









Plan Commission Staff Report

Prepared by the **Department of Planning and Development**

Hearing Date: August 14, 2025

Transaction Number: RZ-0444-2025.

Parcel Number(s): 20-11-25-451-001.000-014.

Existing Zoning: A-1.

Petition: For a zone map change from A-1 to B-2.

Petitioner: Cesar Manuel Valdez.

Location: East side of US 33, 1,260 ft. north of CR 40, in Elkhart Township.

Adjacent Zoning and Land Uses: The following table shows the zoning and current land use for the subject property and adjacent sites.

	Zoning	Current Land Use
Subject Property	A-1	Residential
North	A-1	Residential
South	DPUD B-3, DPUD R-1	RV Storage lot, Residential
East	DPUD B-3	RV Storage lot
West	City of Goshen, M-2	RV Storage lot, Manufacturing

Site Description: The property is made up of a single 1.25-acre parcel. It is rectangular in shape and has an existing residence (2,016 sq. ft.) and detached garage (576 sq. ft.).

History and General Notes:

None.

Zoning District Purpose Statement: The purpose of the B-2, General Business, zoning district is to accommodate a variety of medium intensity retail, commercial, service, dining and entertainment uses. The zoning district may serve as a transitional district between less intense commercial uses and limited manufacturing uses.

Staff Analysis: The purpose of this rezoning petition is to allow a business use to be run on the property.

Plan Commission Staff Report (Continued)

Hearing Date: August 14, 2025

The staff, after reviewing this petition, recommends **APPROVAL** of this rezoning for the following reasons:

- 1. The requested Zoning Map Amendment complies with the Comprehensive Plan. The plan calls for commercial development to be directed to urban growth areas and in designated transportation corridors.
- 2. The request is in character with current conditions, structures, and uses on the subject property and in its surroundings. The proposed zoning will be transitional between the heavier commercial and manufacturing uses and the adjacent residential parcels.
- 3. The most desirable use of the subject property is residential, commercial, and/or other compatible and supporting uses.
- 4. The request conserves property values. The B-2 zoning district limits the intensity of the uses for the adjacent residential properties.
- 5. The proposed rezoning promotes responsible growth and development. The rezoning directs business growth to an existing commercial area on a major transportation corridor adjacent to Goshen City limits.

RZ-0444-2025

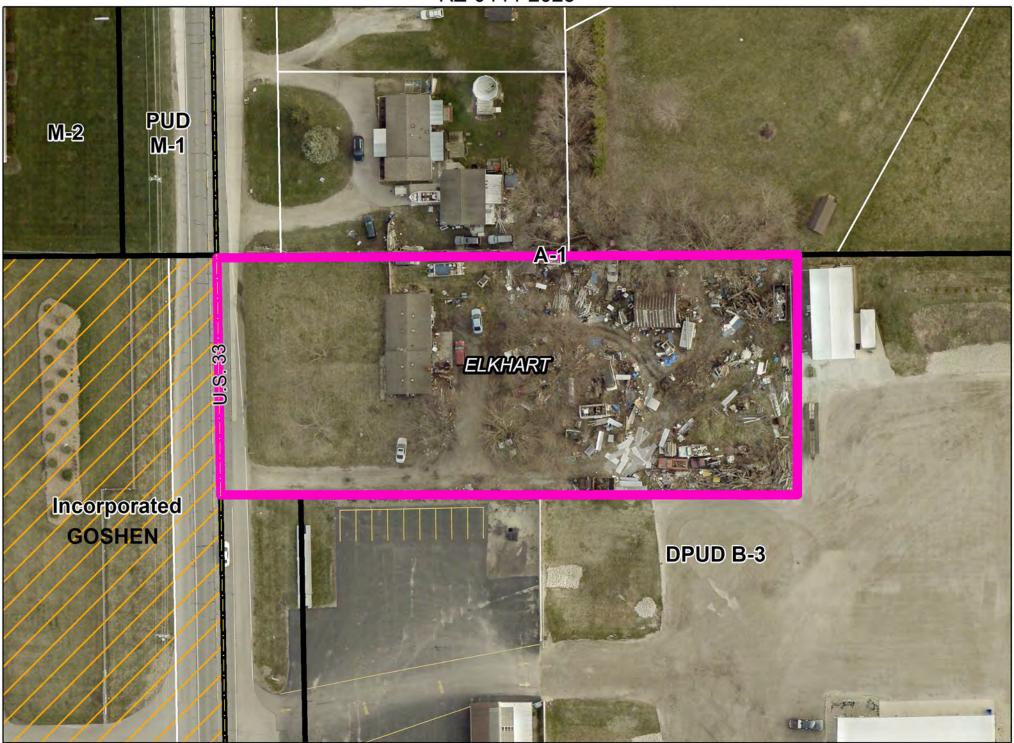
PLAN COMMISSION & BOARD OF ZONING APPEALS

Elkhart County Planning & Development Public Services Building

4230 Elkhart Road, Goshen, Indiana, 46526 Phone - (574) 971-4678 Fax - (574) 971-4578

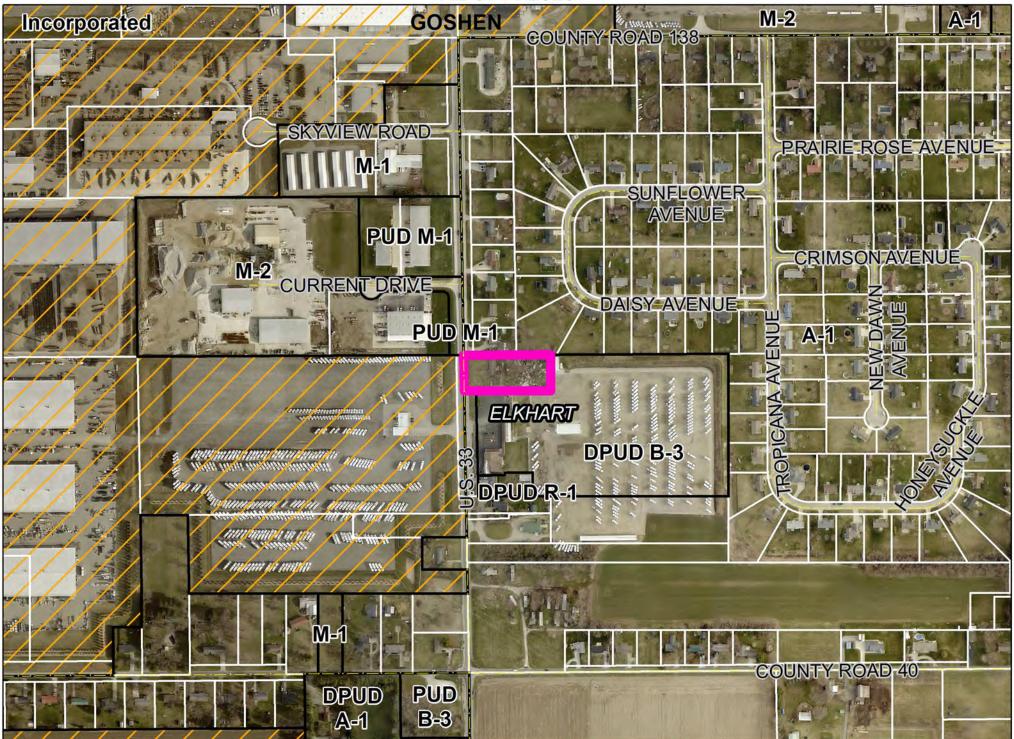
Rezoning - Rezoning

August 14, 2025 07/07/2025 RZ-0444-2025 Date: Meeting Date: Transaction #: Plan Commission Hearing (Rezoning) Description: FOR A ZONE MAP CHANGE FROM A-1 TO B-2 Contacts: Applicant Land Owner Cesar Manuel Valdez Cesar Manuel Valdez 57105 County Road 21 57105 County Road 21 Goshen, IN 46528 Goshen, IN 46528 20-11-25-451-001.000-014 Site Address: 65764 Us Highway 33 Parcel Number: Goshen, IN 46528 Elkhart Township: East Side Of Us 33, 1260 ft. North Of County Road 40 Location: Subdivision: Lot# 1.25 148.00 330.00 Lot Area: Frontage: Depth: Zoning: A-1 NPO List: RESIDENTIAL Present Use of Property: Legal Description: Comments: Applicant Signature: Department Signature:



RZ-0444-2025





CESAR M. VALDEZ Name: 65764 US 33 GOSHEN IN 46526 Site address: **Subdivision and** RESIDENTIAL SITE BULL HOME lot number: 20-11-25-451-001000 Parcel number: Existing shed to be removed 24 20 363 1 Existing Residence 40 1,785 sq. Ft. 25 Proposed Parking Lot 10 US Highway 33

<150 J

Plan Commission Staff Report

Prepared by the **Department of Planning and Development**

Hearing Date: August 14, 2025

Transaction Number: DPUD-0445-2025.

Parcel Number(s): 20-15-04-200-008.000-018, 20-15-04-200-014.000-018.

Existing Zoning: DPUD B-3 & GPUD B-3.

Petition: For a zone map change from DPUD B-3 & GPUD B-3 to DPUD B-3 and for primary approval of a 1-lot minor subdivision to be known as BROOKVIEW FARMS PHASE 1 DPUD B-3 AMENDMENT.

Petitioner: Conservative Business Concepts LLC, represented by Abonmarche Consultants.

Location: Northeast corner of Fernbrook Rd. & CR 142, west side of SR 15, in Jackson Township.

Adjacent Zoning and Land Uses: The following table shows the zoning and current land use for the subject property and adjacent sites.

	Zoning	Current Land Use
Subject Property	GPUD B-3 & DPUD B-3	Vacant & Commercial
North	GPUD B-3	Vacant
South	R-1	Residential
East	R-1	SR 15
West	R-1	Vacant

Site Description: The subject property consists of two parcels totaling 2.21 acres. The 1.51-acre parcel features a 2,536 sq. ft. dental office, and the 0.7-acre parcel is vacant.

History and General Notes:

- ➤ **April 5, 2004** The Board of County Commissioners approved a zone map change from R-1 to GPUD B-3 (PC 2004-13).
- ➤ **June 6, 2005** The Board of County Commissioners approved a zone map change from GPUD B-3 to DPUD B-3 to be known as Brookview Farms Phase One DPUD (PC 2005-15).

Zoning District Purpose Statements: The purpose of the DPUD, Detailed Planned Unit Development, Overlay zoning district, is to allow an applicant the benefit of flexibility in development in exchange for increased public or private amenities that go beyond the requirements of the Development Ordinance. The purpose of the B-3, Heavy Business, zoning district is to accommodate higher-impact community and regional developments. The district also accommodates uses related to vehicular travel, interstate commerce, heavy equipment, trucking, and outdoor storage. The zoning district is appropriately applied adjacent to interstates and major state or county highways.

Staff Analysis: The purpose of this rezoning petition is to expand the property to allow for a new 3,021 ft2 building addition, additional parking, and a new stormwater retention area.

Plan Commission Staff Report (Continued)

Hearing Date: August 14, 2025

The staff, after reviewing this petition, recommends **APPROVAL** of this rezoning for the following reasons:

- 1. The requested Zoning Map Amendment complies with the Comprehensive Plan. Commercial development in the county should be directed to Urban Growth Areas and in designated transportation corridors, to take advantage of their proximity to municipal infrastructure. The property is in the New Paris area along SR 15.
- 2. The request is in character with current conditions, structures, and uses on the subject property and in its surroundings. The subject property is a commercial property with an existing dental office in a mixed-use area.
- 3. The most desirable use of the subject property is commercial and/or other compatible and supporting uses.
- 4. The request conserves property values by allowing an existing commercial property to expand under the appropriate zoning district.
- 5. The proposed rezoning promotes responsible growth and development. The proposed rezoning promotes responsible growth and development. The DPUD limits the use and details contained in the petition, site plan/support drawing, and PUD ordinance. The property is served by public sewer from the New Paris Conservancy District.

Staff Analysis Continued: The staff, after reviewing this petition with the assistance of the Elkhart County Technical Committee, recommends **APPROVAL** of this DPUD amendment and primary plat as the development meets all pertinent standards.

DPUD-0445-2025

PLAN COMMISSION & BOARD OF ZONING APPEALS

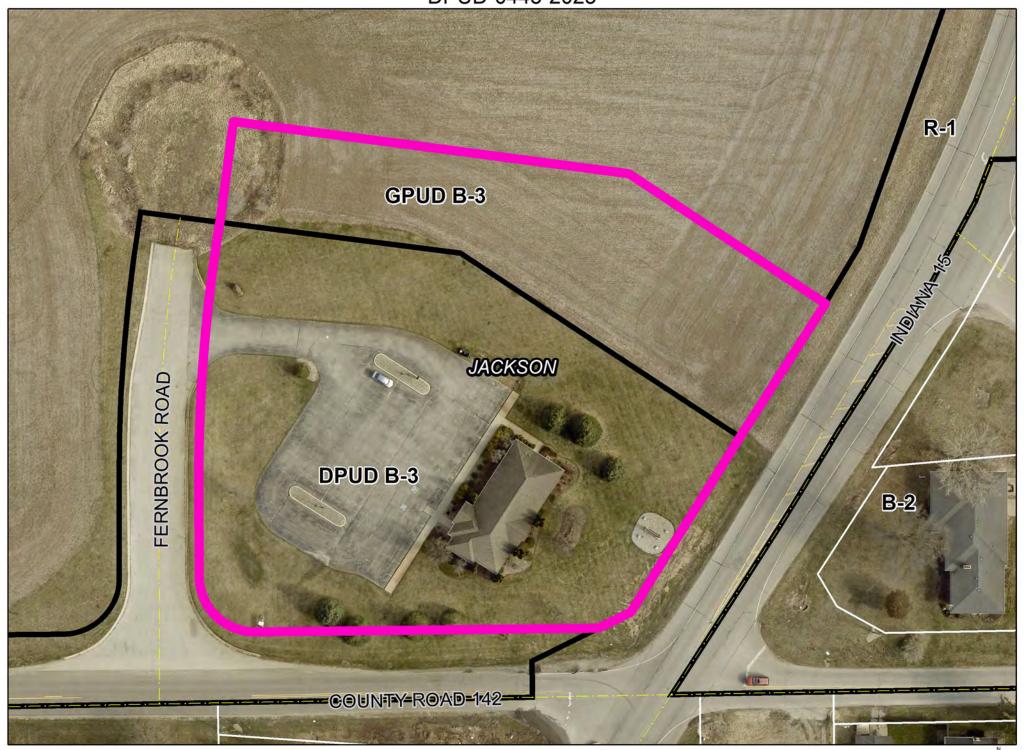
Elkhart County Planning & Development Public Services Building

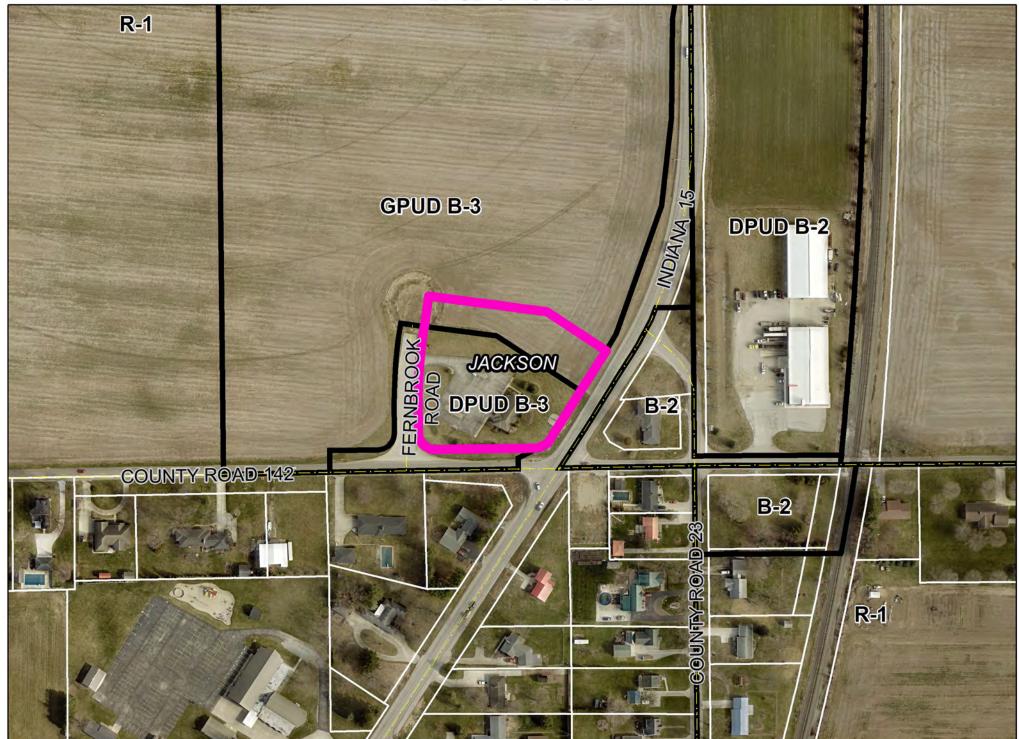
4230 Elkhart Road, Goshen, Indiana, 46526 Phone - (574) 971-4678 Fax - (574) 971-4578

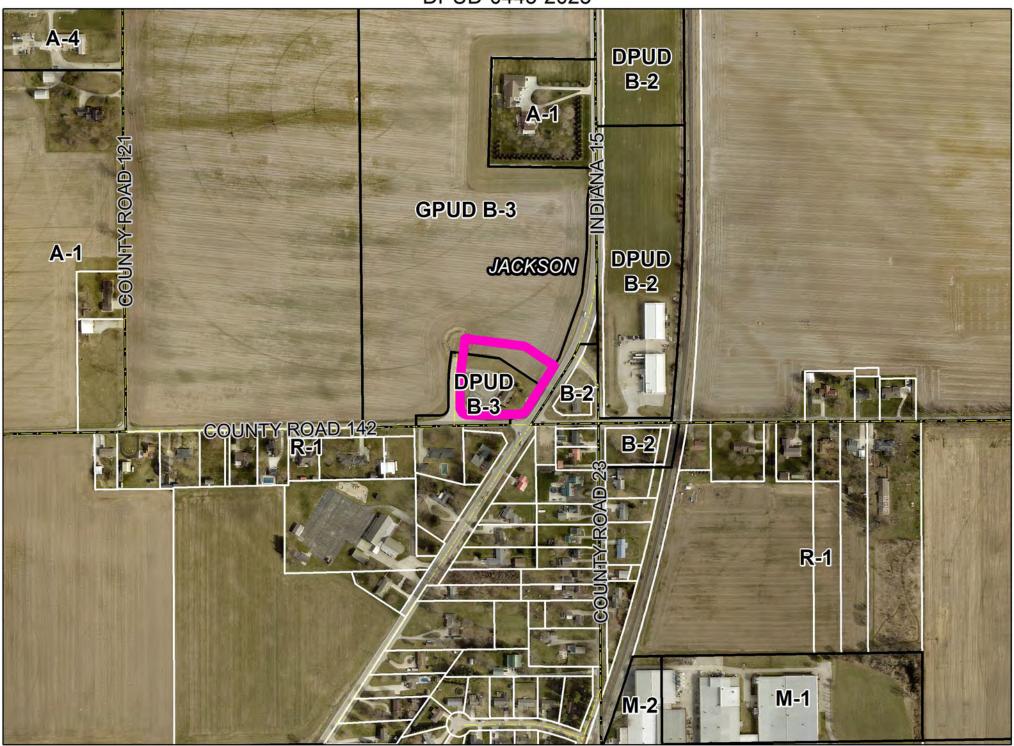
Detailed PUD Amendment - Rezoning, Plat & Site Plan

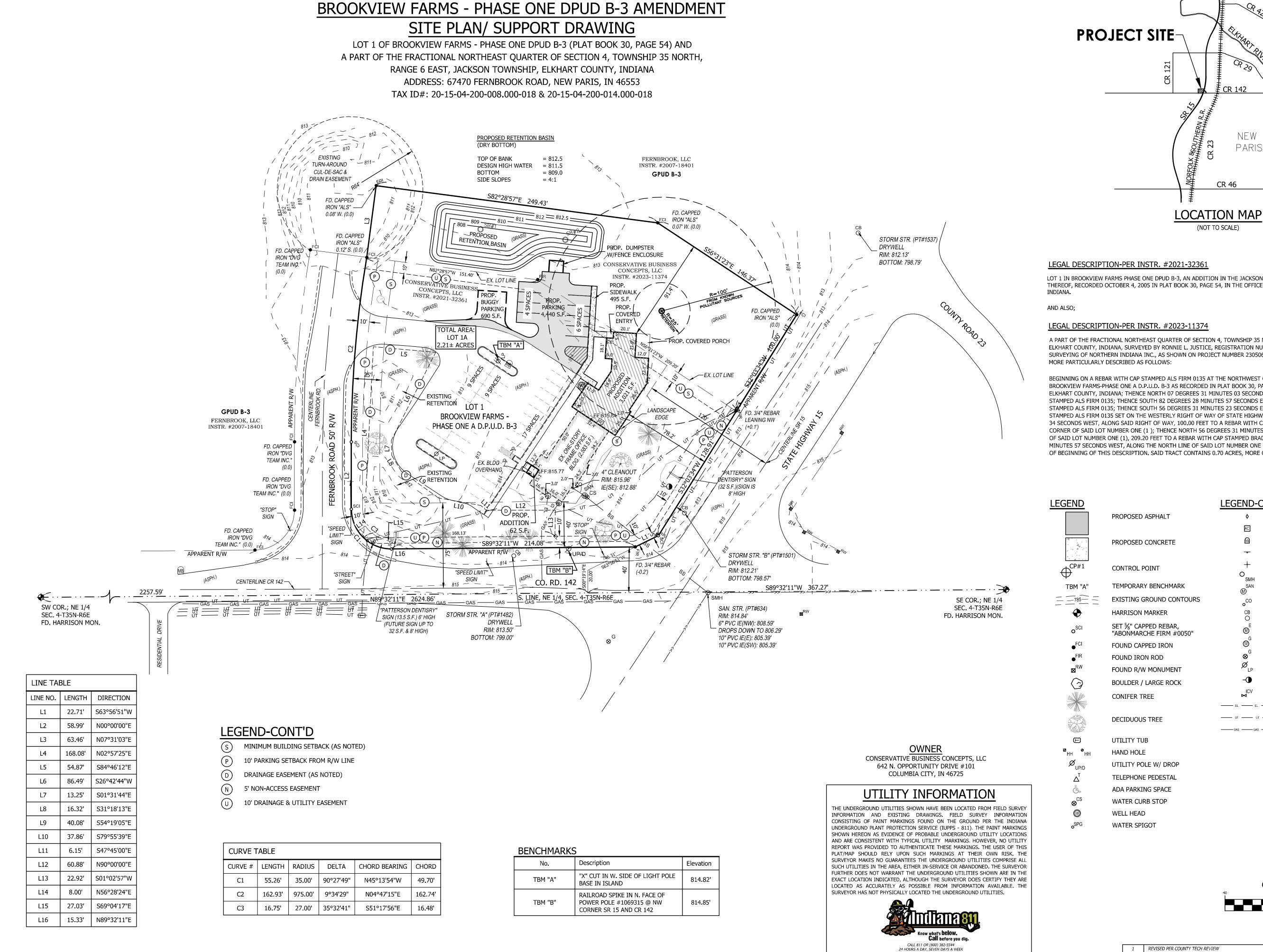
Date: 07/07/2025 Meet	ting Data:	it 14, 2025 ion Hearing (PUD)	ion #: DPUD-0445-2025		
Description: For a zone map change from GPUD B-3 to DPUD B-3, and for primary approval of a 1-lot minor subdivision to be known as BROOKVIEW FARMS PHASE 1 DPUD B-3 Amendment					
Contacts: Applicant Abonmarche Consultants 303 River Race Dr. Suite 206 Goshen, IN 46526	Land Owner Conservative Business Concepts Llc 642 N Opportunity Dr #101 Columbia City, IN 46725	Private Surveyor Abonmarche Consultants 303 River Race Dr. Suite 206 Goshen, IN 46526			
Site Address: 67470 Fernbrook Rd New Paris, IN 46553		Parcel Number:	20-15-04-200-008.000-018 20-15-04-200-014.000-018		
Township: Jackson Location: Northeast Corner Of Fernbro	ook Rd & County Road 142 & W	est Side Of Sr 15			
Subdivision: BROOKVIEW FARMS I	PHASE I	Lot#			
Lot Area:	Frontage:		Depth:		
Zoning: B-3, DPUD B-3, GPUD		NPO List:			
Present Use of Property: COMMERCI	AL				
Legal Description:					
Comments: SN-2800-2021 NEEDS ELE	CTRICAL INSPECTION FOR S	IGN			
Applicant Signature:		Department Signature:			

August 14, 2025







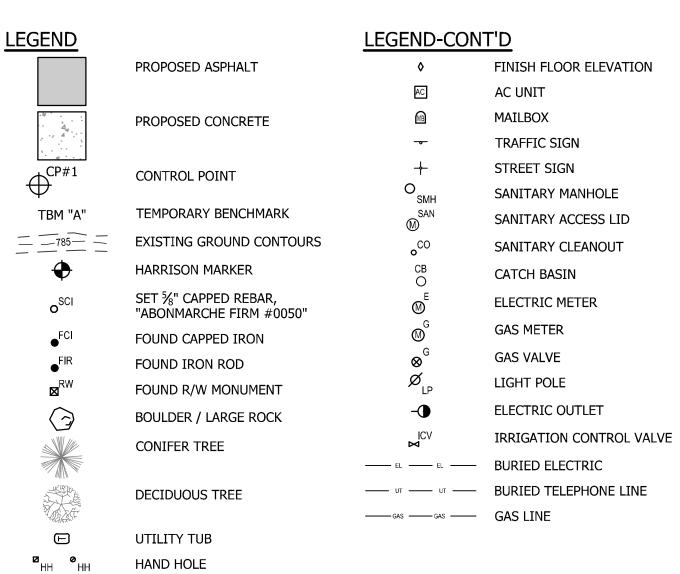


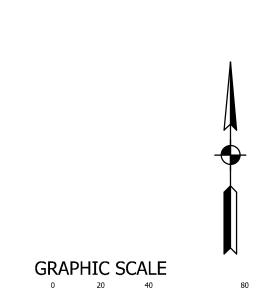
CR 42 PARIS CR 46

LOT 1 IN BROOKVIEW FARMS PHASE ONE DPUD B-3, AN ADDITION IN THE JACKSON TOWNSHIP IN ELKHART COUNTY, AS PER PLAT THEREOF, RECORDED OCTOBER 4, 2005 IN PLAT BOOK 30, PAGE 54, IN THE OFFICE OF THE RECORDER OF ELKHART COUNTY,

A PART OF THE FRACTIONAL NORTHEAST QUARTER OF SECTION 4, TOWNSHIP 35 NORTH, RANGE 6 EAST, JACKSON TOWNSHIP ELKHART COUNTY, INDIANA, SURVEYED BY RONNIE L. JUSTICE, REGISTRATION NUMBER 80900004, WITH ADVANCED LAND SURVEYING OF NORTHERN INDIANA INC., AS SHOWN ON PROJECT NUMBER 230506 CERTIFIED ON JUNE 13, 2023, AND BEING

BROOKVIEW FARMS-PHASE ONE A D.P.U.D. B-3 AS RECORDED IN PLAT BOOK 30, PAGE 54 IN THE OFFICE OF THE RECORDER OF STAMPED ALS FIRM 0135 SET ON THE WESTERLY RIGHT OF WAY OF STATE HIGHWAY 15; THENCE SOUTH 32 DEGREES 03 MINUTES MINUTES 57 SECONDS WEST, ALONG THE NORTH LINE OF SAID LOT NUMBER ONE (1) A DISTANCE OF 151 .40 FEET TO THE POINT OF BEGINNING OF THIS DESCRIPTION. SAID TRACT CONTAINS 0.70 ACRES, MORE OR LESS.





(IN FEET)

1 inch = 40 ft.

1 REVISED PER COUNTY TECH REVIEW NO. REVISION DESCRIPTION:

TRM 07-25-2025

DPUD PLAN/S

TRM FIELDBOOK: CLB#16, PG 39 PM REVIEW: BEM QA/QC REVIEW: CLB 7/7/2025 LS21900005



ZONING FOR THIS PROPERTY IS DPUD B-3 (ORDINANCE NO. PC04-13) AND GPUD B-3 (VACANT PROPERTY TO NORTH OF LOT #1). PROPOSED ZONING WOULD BE DPUD B-3 FOR THE ENTIRE PROJECT.

2. INTENTION FOR OWNERSHIP

A. CURRENT OWNERSHIP

THE PROJECT IS LOCATED NORTH OF C.R. 142 AND WEST OF STATE ROAD 15. THE CURRENT DPUD IS 1.51± ACRES, MORE OR LESS. THIS PROJECT WOULD EXPAND LOT 1 BY INCLUDING ADDITIONAL LAND TO THE NORTH (0.70± ACRES) THAT IS OWNED BY CONSERVATIVE BUSINESS CONCEPTS, LLC (INSTR. #2021-32361 (LOT #1) & (INSTR. #2023-11374 (0.70 ACRE PARCEL)).

B. DEVELOPMENT OWNERSHIP

REAR YARD = 15 FEET

THE OWNER WOULD LIKE TO EXPAND LOT 1 OF BROOKVIEW FARMS PHASE ONE DPUD B-3 TO:

ADD THE VACANT LOT TO THE NORTH OF THE CURRENT DPUD BOUNDARY INTO THE DPUD UPDATE THE SITE PLAN TO ADD ADDITIONAL PARKING AND BUGGY PARKING

UPDATE THE PLAN TO ADD A 3,021 SQ. FT. ADDITION TO THE EXISTING DENTISTRY BUILDING UPDATE AND ADD A NEW STORMWATER RETENTION BASIN FOR THE PROPOSED BUILDING AND PARKING ADDITIONS

3. <u>DEVIATION REQUEST</u>- NONE ANTICIPATED AT THIS TIME

4. <u>SETBACKS - "B-3" ZONING DISTRICT ELKHART COUNTY</u>
FRONT YARD = 55 FEET FROM CENTERLINE OF C.R. #142 & 120 FEET FROM CENTERLINE OF STATE ROAD 15

PARKING SETBACK = 10 FEET FROM RIGHT-OF-WAY LINE OR 55 FEET FROM CENTERLINE OF RIGHT-OF-WAY WHICHEVER IS GREATER.

5. <u>COMPATIBILITY</u>
THE PROPERTY IS USED AS DENTIST OFFICE AND WILL BE CONSISTENT WITH THE ZONING USES OF THE SITE AND SURROUNDING AREA.

6.	DENSITY			
	EXISTING BUILDING	2,583± SF	0.06± ACRES	2.67%
	PROPOSED BUILDING	3,083± SF	0.07± ACRES	3.21%
	EXISTING CONCRETE/ASPH	18,103± SF	0.42± ACRES	18.82%
	PROPOSED CONCRETE/ASPH	4,204± SF	0.10± ACRES	4.34%
	EXISTING GRAVEL	$1,025 \pm SF$	0.02± ACRES	1.09%
	PROPOSED GRAVEL	880± SF	0.02± ACRES	0.90%
	LAWN AND PASTURE	$66,375 \pm SF$	1.52± ACRES	<u>68.97%</u>
	TOTAL	96,253± SF	2.21± ACRES	100.0%

THIS PROJECT IS SERVICED BY THE NEW PARIS CONSERVANCY DISTRICT SANITARY SEWER SYSTEM AND PRIVATE WATER WELL THAT IS

SOILS
THE ENTIRE SITE IS COMPOSED OF BtxA (BRISTOL LOAMY SAND, 0 TO 2 PERCENT SLOPES) AND A DEPTH TO SEASONAL HIGH WATER OF GREATER THAN 80 INCHES. SOIL INFORMATION WAS OBTAINED FROM THE "SOIL SURVEY OF ELKHART COUNTY, INDIANA". THE SURVEY WAS PUBLISHED BY THE USDA AND NRCS IN COOPERATION WITH PURDUE UNIVERSITY AND THE STATE SOIL CONSERVATION BOARD.

THE SOIL REPORT FROM SCHNOEBELEN'S SOIL CONSULTING FOR THE DRAINAGE IS ATTACHED.

STORM WATER DRAINAGE REPORT
PLEASE REFER TO THE REPORT ON THIS SHEET FOR THE PROPOSED RETENTION BASIN. STORMWATER DRAINAGE FOR THE PROPOSED BUILDING AND PARKING ADDITIONS WILL BE MANAGED ON-SITE.

THE SECTION OF C.R. 142 SERVICING THE PROPOSED SITE IS NEITHER CONSIDERED A PRIMARY OR A SECONDARY ROAD. THE SITE HAS

SITE IMPROVEMENT REPORT
AN EXPANDED PARKING LOT IS DESIGNED TO SERVE CUSTOMERS. THE PARKING REQUIREMENTS IS 1 SPACE PER 250 SF NET FLOOR AREA PLUS 1 SPACE PER EMPLOYEE.

2,086 SF OFFICE / 250 SF = 9 SPACES REQUIRED (EXISTING BUILDING) 2,464 SF OFFICE / 250 SF = 10 SPACE REQUIRED (PROPOSED BUILDING)

= 12 SPACES REQUIRED TOTAL REQUIRED = 31 SPACES

PARKING PROVIDED = 43 SPACES (9' BY 20') 2 ADA SPACES (EXISTING)

THE PROJECT IS SUBJECT TO ELKHART COUNTY STANDARDS FOR BOUNDARY BUFFER LANDSCAPING ADJACENT TO RESIDENTIAL USES WHERE APPLICABLE. THERE IS CURRENTLY BUSINESS ZONING USES ADJACENT TO THE NORTH AND WEST PROPERTY LINES; THEREFORE, NO BUFFER LANDSCAPING IS REQUIRED. LOT 1 WILL RETAIN ALL EXISTING LANDSCAPING POSSIBLE THAT IS NOT AFFECTED BY THE PROPOSED BUILDING & PARKING AREA.

SIGNAGE
THE EXISTING SIGN ON SR 15 WILL REMAIN UNCHANGED THE EXISTING SIGN ON CR 142 WILL BE UPDATED TO BE ILLUMINATED AND UP TO 32 S.F. AND 8' HIGH

POTENTIAL WALL MOUNTED SIGN THAT WILL MEET B-3 REQUIREMENTS

SITE LIGHTING WILL CONFORM TO ELKHART COUNTY REQUIREMENTS. THE EXISTING PROPERTY INCLUDES BUILDING MOUNTED LIGHTING WITH PARKING LOT LIGHT POLES. THE PROPOSED BUILDING AND PARKING ADDITIONS TO INCLUDE SIMILAR TYPE LIGHTING FOR CONSISTENCY.

<u>FENCING</u>
NO ADDITIONAL FENCING IS PROPOSED AT THIS TIME.

12. <u>BENCHMARK</u> (GPS DERIVED, 1988 VERTICAL DATUM)

TBM "A"- "X" CUT IN W. SIDE OF LIGHT POLE BASE IN ISLAND @ ELEVATION 814.82 FEET.

TBM "B' - RAILROAD SPIKE IN N. FACE OF POWER POLE #1069315 @ NW CORNER S.R. 15 AND C.R. 142 @ ELEVATION 814.85 FEET.

13. <u>CONTOURS</u>
TOPOGRAPHIC MAPPING UNITS ARE MEASURED AND DISPLAYED IN ENGLISH UNITS (US SURVEY FEET HORIZONTALLY AND NAVD 1988

VERTICALLY) ESTABLISHED BY GPS MEASUREMENTS. 14. FLOOD NOTE
THIS PARCEL IS NOT WITHIN 1% ANNUAL CHANCE FLOOD (SPECIAL FLOOD HAZARD AREA) AS SCALED AND DEPICTED ON THE FEMA/FIRM

COMMUNITY PANEL NUMBER 18039C0264D WITH AN EFFECT MAP DATE OF AUGUST 2, 2011.

15. <u>ELEVATIONS OF BUILDINGS</u>
THE PROPOSED BUILDING ADDITION WILL MATCH THE FLOOR ELEVATION OF THE EXISTING BUILDING WITH THE FINISHED ADJACENT GRADE SET TO ENSURE ADEQUATE FLOW OF STORMWATER AWAY FROM THE FOUNDATION. THE PROPOSED BUILDING ADDITION WILL

BE OF STANDARD CONSTRUCTION AND DESIGNED SEPARATELY BY AN ARCHITECT HIRED DIRECTLY BY THE PROPERTY OWNER.

AN EROSION CONTROL PLAN WILL BE PREPARED FOR THE CONTRACTOR TO FOLLOW DURING CONSTRUCTION, HOWEVER, AN EROSION CONTROL PERMIT IS NOT ANTICIPATED FOR THE PROPOSED PROJECT SINCE THERE IS LESS THAN ONE ACRE OF LAND DISTURBANCE CALCULATED FOR THE PROPOSED BUILDING AND PARKING ADDITIONS, AND NEW STORMWATER RETENTION BASIN.

IF THE AMOUNT OF ANTICIPATED LAND DISTURBANCE ENDS UP EXCEEDING MORE THAN ONE ACRE OF LAND, AN EROSION CONTROL PLAN/STORMWATER POLLUTION PREVENTION PLAN WILL BE PREPARED AND SUBMITTED TO ELKHART COUNTY FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

STORMWATER DRAINAGE CALCULATIONS

THE FOLLOWING STORMWATER DRAINAGE CALCULATIONS ARE FOR THE PROPOSED RETENTION BASIN THAT WILL PROVIDE STORMWATER STORAGE FOR THE NEW BUILDING AND PARKING ADDITIONS FOR THE 100-YEAR, 24 HOUR STORM EVENT, THE EXISTING BUILDING AND PARKING DRAIN TO EXISTING RETENTION BASINS LOCATED ON THE WEST AND SOUTH SIDES OF THE EXISTING PARKING. THERE IS NO CHANGE TO THE EXISTING RETENTION BASINS WITH THIS PROPOSED PROJECT. THE FOLLOWING STORMWATER CALCULATIONS ARE BASED ON THE PUBLISHED STORM INTENSITIES CONTAINED IN THE CURRENT ELKHART COUNTY "GUIDELINES AND STANDARDS FOR DESIGN AND PUBLIC IMPROVEMENT, STREET STANDARDS" AND THE COUNTY'S SPREADSHEET USING THE RATIONAL METHOD.

ESTIMATED DRAINAGE AREA = 0.6± ACRES (FOR PROPOSED RETENTION BASIN)

ESTIMATED COVERAGE PROPOSED BUILDING ADDITION (C=0.95) = 0.07± ACRES PROPOSED HARD SURFACE (C=0.95) $= 0.13 \pm ACRES$ PROPOSED RETENTION BASIN (C=1.00) $= 0.10 \pm ACRES$ OPEN AREA / LANDSCAPE (C=0.30) $= 0.30 \pm ACRES$ $= 0.6 \pm ACRES$

MODIFIED RUNOFF COEFFICIENT CALCULATIONS

 $C = ((0.07 + 0.13) \times 0.95) + (0.10 \times 1.00) + (0.30 \times 0.30) = 0.63$ 0.6± Acres

	<u>SOIL BORINGS</u>				
	SB#	SHWT	FWT	COMPACTED TILL	
	1	NONE	NONE/115"	NONE/115"	
	2	NONE	NONE/115"	NONE/115"	
SHWT — SEASONAL HIGH WATER TABLE FWT — FREE WATER TABLE					

RETENTION STORAGE VOLUME CALCULATIONS PROPOSED RETENTION BASIN

ESTIMATED DRAINAGE AREA = 0.6 RUNOFF COEFFICIENT, C = 0.63 DESIGN RELEASE RATE = 0.00

STORM	100 YEAR	INFLOW	RELEASE	STORAGE	REQUIRED
DURATION	INTENSITY	RATE	RATE	RATE	STORAGE
(hours)	(in/hr)	(cfs)	(cfs)	(cfs)	(cft)
0.25	6.47	2.46	0.00	2.46	2231
0.50	3.96	1.50	0.00	1.50	2731
0.75	2.71	1.03	0.00	1.03	2804
1	1.98	0.75	0.00	0.75	2731
2	1.55	0.59	0.00	0.59	4276
3	1.14	0.43	0.00	0.43	4718
4	0.92	0.35	0.00	0.35	5076
5	0.77	0.29	0.00	0.29	5311
6	0.67	0.25	0.00	0.25	5545
7	0.59	0.22	0.00	0.22	5697
8	0.53	0.20	0.00	0.20	5849
9	0.48	0.18	0.00	0.18	5959
10	0.44	0.17	0.00	0.17	6069
15	0.32	0.12	0.00	0.12	6621
20	0.25	0.10	0.00	0.10	6897
24	0.22	0.08	0.00	0.08	7283

torm intensities are referenced from the Elkhart County Street Standards, effective July 8, 2024

STORAGE REQUIRED:	7,283 437 0.18	cft cft (6% siltation factor) Acre-Ft	
STORAGE PROVIDED BELOW DESIGN HIGH WATER:	0.21	Acre-Ft	
ADDITIONAL STORAGE (EREEROARD):	0.14	Acre-Et	

PROPOSED RETENTION BASIN VOLUME

PER DESIGN PLA	<u>N CONTOURS)</u>				
Contour	Area (sft)	Average (sft)	Volume (acre-ft)	_	
809	2,065				
810	3,253	2,659	0.061		
811	4,555	3,904	0.090		
811.5	5,244	4,900	0.056		
812	5,957	5,601	0.064		
812.5	6,696	6,327	0.073		
	Volu	me Below 811.5 =	0.21	Acre-Ft	
Volume of Fr	eeboard Betwee	en 812.5 to 811.5 =	0.14	Acre-Ft	

CONSERVATIVE BUSINESS CONCEPTS, LLC 642 N. OPPORTUNITY DRIVE #101 COLUMBIA CITY, IN 46725

UTILITY INFORMATION

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. FIELD SURVEY INFORMATION CONSISTING OF PAINT MARKINGS FOUND ON THE GROUND PER THE INDIANA UNDERGROUND PLANT PROTECTION SERVICE (IUPPS - 811). THE PAINT MARKINGS SHOWN HEREON AS EVIDENCE OF PROBABLE UNDERGROUND UTILITY LOCATIONS AND ARE CONSISTENT WITH TYPICAL UTILITY MARKINGS. HOWEVER, NO UTILITY REPORT WAS PROVIDED TO AUTHENTICATE THESE MARKINGS. THE USER OF THIS PLAT/MAP SHOULD RELY UPON SUCH MARKINGS AT THEIR OWN RISK, THE SURVEYOR MAKES NO GUARANTEES THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH THE SURVEYOR DOES CERTIFY THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.



LAND SURVEYOR'S CERTIFICATE

I, CAMERON L. BERON, HEREBY CERTIFY THAT I AM A LAND SURVEYOR, LICENSED IN COMPLIANCE WITH THE LAWS OF THE STATE OF INDIANA, AND THAT THIS SURVEY WAS PERFORMED WHOLLY BY OR UNDER MY DIRECTION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, WAS EXECUTED ACCORDING TO THE SURVEY REQUIREMENTS IN TITLE 865, ARTICLE 1.1, CHAPTER 12, SECTIONS 1 THROUGH 29 OF THE INDIANA ADMINISTRATIVE CODE (IAC).

I AFFIRM UNDER THE PENALTIES FOR PERJURY, THAT I HAVE TAKEN REASONABLE CARE TO REDACT EACH SOCIAL SECURITY NUMBER IN THIS DOCUMENT, UNLESS REQUIRED BY LAW.

ameron I Beron	7/7/2025
CAMERON L. BERON, P.S.	DATE
PROFESSIONAL SURVEYOR #LS21900005	
STATE OF INDIANA	

1 REVISED PER COUNTY TECH REVIEW NO. REVISION DESCRIPTION:

QA/QC REVIEW: CLB 7/7/2025 LS21900005 STATE OF

TRM

CLB#16, PG 39

FIELDBOOK:

ARMS UD B-3



BROOKVIEW FARMS-PHASE ONE DPUD B-3 AMENDMENT

LOT 1 OF BROOKVIEW FARMS - PHASE ONE A DPUD B-3 (PLAT BOOK 30, PAGE 54) AND A PART OF THE FRACTIONAL NORTHEAST QUARTER OF SECTION 4, TOWNSHIP 35 NORTH, RANGE 6 EAST, JACKSON TOWNSHIP, ELKHART COUNTY, INDIANA

PREPARED FOR:

ELKHART COUNTY PLANNING DEPARTMENT 4230 ELKHART ROAD GOSHEN, IN 46526

PREPARED BY:

ABONMARCHE CONSULTANTS, INC. 303 RIVER RACE DRIVE Goshen, IN 46526 (574) 533-9913

> JULY 7, 2025 REVISED JULY 22, 2025

1) LEGAL DESCRIPTION:

13659 CO RD 20, MIDDLEBURY, IN 46540 – LOT 1 OF LOT 1 OF BROOKVIEW FARMS - PHASE ONE A DPUD B-3

THE PROJECT SITE IS COMPRISED OF THE FOLLOWING PARCELS TOTALING ABOUT 2.2 ACRES.

- PARCEL 20-15-04-200-008.000-018 (1.5± ACRES) ZONED "DPUD B-3" DETAILED PLANNED UNIT DEVELOPMENT AND KNOWN AS "LOT 1 OF BROOKVIEW FARMS PHASE ONE".
- PARCEL 20-15-04-200-014.000-018 (0.7± ACRES) ZONED "GPUD B-3" GENERAL PLANNED UNIT DEVELOPMENT.

2) INTENTION FOR OWNERSHIP:

THE PROPOSED PROJECT INCLUDES

- UPDATE SITE PLAN TO ADD A 3,021 SQ. FT. ADDITION TO THE PATTERSON FAMILY DENTISTRY
- INTERIOR RENOVATION
- A NEW WATER WELL.
- EXPAND LOT 1 OF BROOKVIEW FARMS PHASE ONE DPUD B-3 TO ADD THE EMPTY LOT TO THE NORTH OF THE CURRENT DPUD BOUNDARY INTO THE DPUD.
- UPDATE THE SITE PLAN TO ADD ADDITIONAL PARKING FOR CUSTOMERS AND BUGGY PARKING
- UPDATE AND ADD STORMWATER RETENTION AREAS

3) ZONING & PROPOSED LAND USE:

ZONING FOR THIS PROPERTY IS DPUD DPUD B-3 AND GPUD B-3. PROPOSED ZONING WOULD BE DPUD DPUD B-3 FOR THE ENTIRE PROJECT.

<u>SETBACKS - " B-3" ZONE ELKHART COUNTY</u>

FRONT YARD = 55 FEET FROM CENTERLINE OF C.R. #142

120 FEET FROM CENTERLINE OF STATE ROAD 15

SIDE YARD = 10 FEET REAR YARD = 1 5 FEET

PARKING SETBACK= 10 FEET FROM RIGHT OF WAY LINE OR 55 FEET FROM CENTERLINE OF RIGHT OF WAY WHICHEVER IS GREATER.

4) COMPATIBILITY:

THE PROPERTY IS AN EXISTING DENTIST OFFICE AND THE PROPOSED IMPROVEMENTS ARE CONSISTENT WITH THE ZONING AND USE OF THE SITE AND SURROUND AREA.

5) REQUESTED DEVIATIONS:

NONE ANTICIPATED AT THIS TIME

6) DENSITY:

EXISTING BUILDING	2,583 SF	0.059 ACRES	2.67%
PROPOSED BUILDING	3,083 SF	0.071 ACRES	3.21%
EXISTING CONCRETE/ASPH	18,103 SF	0.416 ACRES	18.82%
PROPOSED CONCRETE/ASPH	4,204 SF	0.096 ACRES	4.34%
EXISTING GRAVEL	1,025 SF	0.024 ACRES	1.09%
PROPOSED GRAVEL	880 SF	0.020 ACRES	0.90%
LAWN AND PASTURE	66,375 SF	1.524 ACRES	68.97%
TOTAL	96,253 SF	2.210 ACRES	100.0%

7) SOILS REPORT:

THE ENTIRE SITE IS COMPOSED OF BTXA (BRISTOL LOAMY SAND, 0 TO 2 PERCENT SLOPES) AND A DEPTH TO SEASONAL HIGH WATER OF GREATER THAN 80 INCHES. SOIL INFORMATION WAS OBTAINED FROM THE "SOIL SURVEY OF ELKHART COUNTY, INDIANA". THE SURVEY WAS PUBLISHED BY THE USDA AND NRCS IN COOPERATION WITH PURDUE UNIVERSITY AND THE STATE SOIL CONSERVATION BOARD.

8) WATER AND SEWAGE DISPOSAL:

THIS PROJECT IS CONNECTED TO THE NEW PARIS CONSERVANCY DISTRICT SANITARY SEWER SYSTEM. THIS PROJECT HAS A PRIVATE WELL THAT IS ANTICIPATED TO BE REPLACED WITH A NEW WELL. NO MUNICIPAL WATER IS NEAR THE SITE.

9) STORM WATER DRAINAGE REPORT:

THE STORMWATER DRAINAGE PLAN WAS INCLUDED ON THE DPUD SITE PLAN AND WILL BE MANAGED ON-SITE

10) TRAFFIC REPORT:

THE SECTION OF C.R. 142 SERVICING THE PROPOSED SITE IS NEITHER CONSIDERED A PRIMARY OR A SECONDARY ROAD. THE SITE HAS ONE EXISTING DRIVE ON CR 142.

THE TIVE IS ATTACHED FOR REVIEW BY ELKHART COUNTY HIGHWAY DEPARTMENT

- EMPLOYEES=12 MAXIMUM
- PATIENT= 60 PER DAY MAXIMUM
- REGULAR DELIVERIES SUCH AS OFFICE AND MEDICIAL SUPPLIES 1/DAY ESTIMATED)

11) PUBLIC IMPROVEMENT REPORT:

NONE ANTICIPATED

12) SITE IMPROVEMENT REPORT

PARKING

AN EXPANDED PARKING LOT IS DESIGNED TO SERVE CUSTOMERS. PARKING FOR MEDICAL/DENTAL CLINIC OR LABORATORY IS 1 SPACE PER 250 SF NET FLOOR AREA PLUS 1 SPACE PER EMPLOYEE.

2,086 SF OFFICE / 250 SF = 9 SPACES REQUIRED (EXISTING BUILDING)
2,464 SF OFFICE / 250 SF = 10 SPACE REQUIRED (PROPOSED BUILDING)

12 EMPLOYEES= 12 SPACES REQUIRED

TOTAL REQUIRED = 31 SPACES

PARKING PROVIDED = 43 SPACES (9' BY 20') 2 ADA SPACES (EXISTING)

LANDSCAPING

THE PROJECT IS SUBJECT TO ELKHART COUNTY STANDARDS FOR BOUNDARY BUFFER LANDSCAPING ADJACENT TO RESIDENTIAL USES WHERE APPLICABLE. THERE IS CURRENTLY BUSINESS ZONING USES ADJACENT TO THE NORTH AND WEST PROPERTY LINES; THEREFORE, NO BUFFER LANDSCAPING IS REQUIRED. PROPOSED LOT 1A WILL RETAIN ALL EXISTING LANDSCAPING POSSIBLE THAT IS NOT AFFECTED BY THE PROPOSED BUILDING & PARKING AREA.

SIGNAGE

- THE EXISTING SIGN ON SR 15 WILL REMAIN UNCHANGED
- THE EXISTING SIGN ON CR 142 WILL BE UPDATED TO BE ILLUMINATED AND UP TO 32 S.F. AND 8' HIGH
- POTENTIAL WALL MOUNTED SIGN THAT WILL MEET B-3 REQUIREMENTS

LIGHTING

SITE LIGHTING WILL CONFORM TO ELKHART COUNTY REQUIREMENTS.

- EXISTING AND PROPOSED WALL MOUNTED LIGHTING ON BUILDINGS.
- PARKING LOT LIGHTING INCLUDES EXISTING LIGHT POSTS IN EACH PARKING LOT ISLAND INLCUDING ANY NEW LIGHTS FOR PARKING EXPANSION.

FENCING - NO ADDITIONAL FENCING IS PROPOSED AT THIS TIME

12) EMPLOYMENT

12 EMPLOYEES MAXIMUM 60 PATIENTS MAXIMUM

13) HOURS OF OPERATION

- EVERY OTHER TUESDAY 8-4
- EVERY WEDNESDAY 8-4
- ONE THURSDAY PER MONTH 8-4
- EVERY FRIDAY 8-1

Plan Commission Staff Report

Prepared by the Department of Planning and Development

Hearing Date: August 14, 2025

Transaction Number: DPUD-0441-2025.

Parcel Number(s): 20-06-24-326-009.000-009.

Existing Zoning: A-1.

Petition: For a zone map change from A-1 to DPUD A-1 and for primary approval of an 8-lot major subdivision to be known as DOROSHENKO A-1 DPUD.

Petitioner: Igor Doroshenko & Nina Mamalat Doroshenko, Husband & Wife, & Andriy Doroshenko & Katya Doroshenko, Husband & Wife, represented by B. Doriot & Associates, Inc.

Location: South side of CR 118, 1,700 ft. west of Old CR 17, in Concord Township.

Adjacent Zoning and Land Uses: The following table shows the zoning and current land use for the subject property and adjacent sites.

	Zoning	Current Land Use
Subject Property	A-1	Agricultural
North	A-1	Residential
South	A-1	Agricultural
East	A-1	Residential
West	A-1	Residential

Site Description: The subject property consists of one parcel totaling 7.829 acres and is currently vacant, used for agricultural production.

History and General Notes:

The subject property and the surrounding area are under the original 1959 County Zoning.

Zoning District Purpose Statements: The purpose of the DPUD, Detailed Planned Unit Development, Overlay zoning district, is to allow an applicant the benefit of flexibility in development in exchange for increased public or private amenities that go beyond the requirements of the Development Ordinance. The purpose of the A-1, Agricultural, zoning district is to accommodate family farms, modestly scaled agricultural operations, agri-businesses, large lot single-family detached dwellings not associated with an agricultural use, residential subdivisions, and other compatible and supporting uses.

Staff Analysis: The purpose of this rezoning petition is to develop an eight-lot major residential subdivision with six duplex lots and two single-family residential lots.

Plan Commission Staff Report (Continued)

Hearing Date: August 14, 2025

The staff, after reviewing this petition, recommends **APPROVAL** of this rezoning for the following reasons:

- 1. The requested Zoning Map Amendment complies with the Comprehensive Plan. Residential development is a desirable feature of a well-planned, economically diverse, and livable community.
- 2. The request is in character with current conditions, structures, and uses on the subject property and in its surroundings. The property will be developed with a mixture of single-family and two-family residential lots.
- 3. The most desirable use of the subject property is residential, agricultural, or other compatible and supporting uses.
- 4. The request conserves property values by maintaining and developing residential use in an existing residential area.
- 5. The proposed rezoning promotes responsible growth and development. The DPUD limits the use and details contained in the petition, site plan/support drawing, and PUD ordinance.

Staff Analysis Continued: The staff, after reviewing this petition with the assistance of the Elkhart County Technical Committee, recommends **APPROVAL** of this DPUD and primary plat as the development meets all pertinent standards.

DPUD-0441-2025

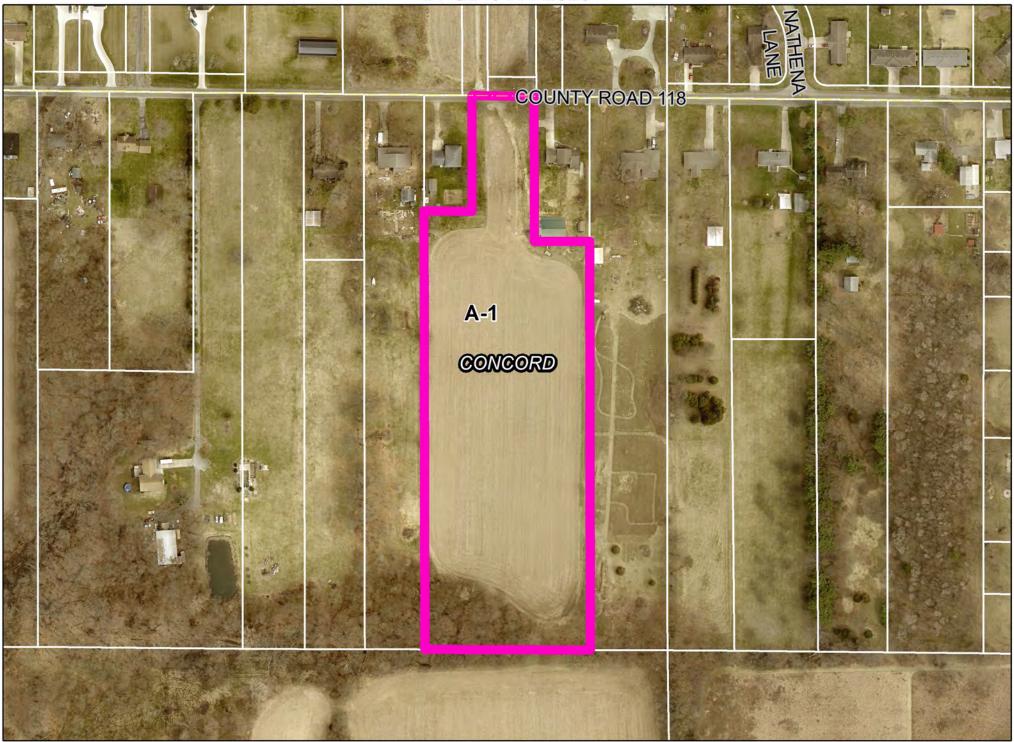
PLAN COMMISSION & BOARD OF ZONING APPEALS

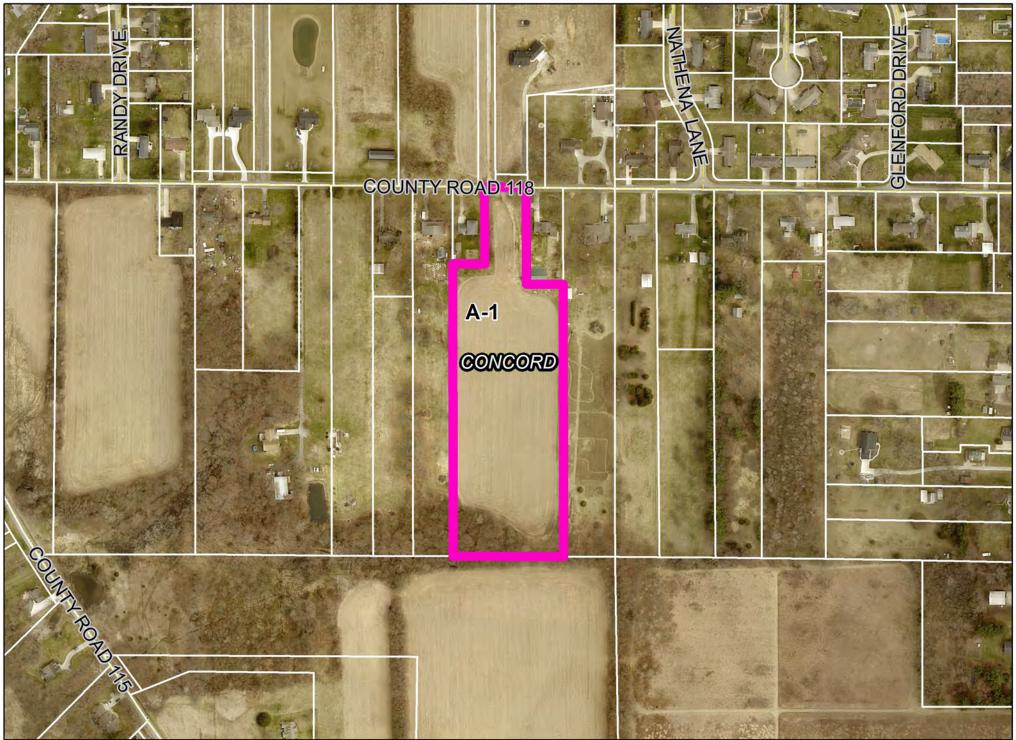
Elkhart County Planning & Development Public Services Building

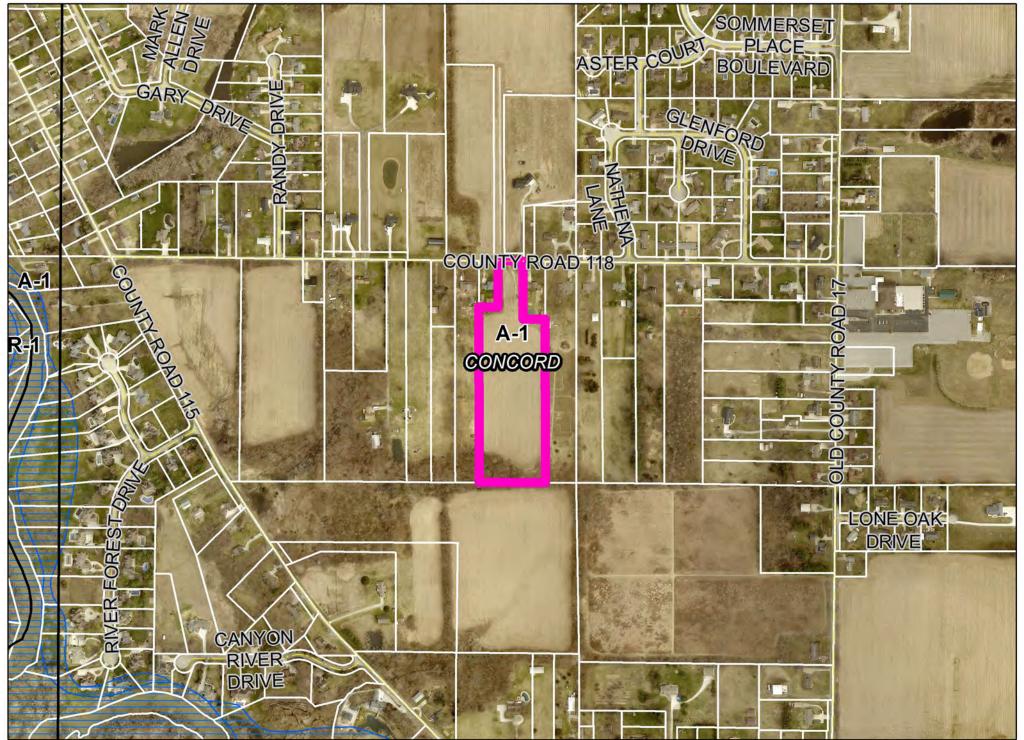
4230 Elkhart Road, Goshen, Indiana, 46526 Phone - (574) 971-4678 Fax - (574) 971-4578

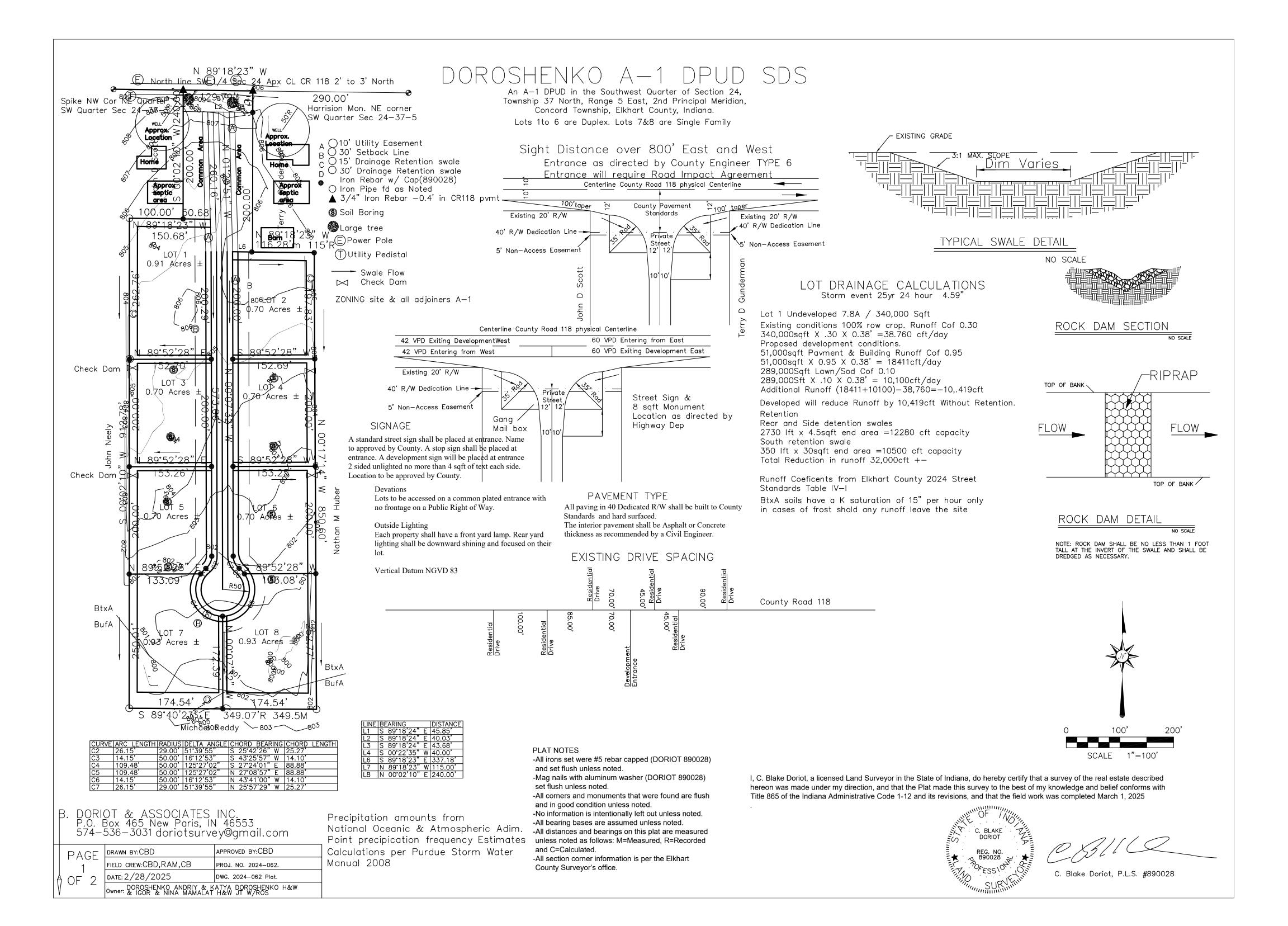
Detailed PUD - Rezoning, Plat & Site Plan

August 14, 2025 07/07/2025 DPUD-0441-2025 Date: Meeting Date: Transaction #: Plan Commission Hearing (PUD) Description: for a zone map change from A-1 to DPUD A-1 and for primary approval of an 8-lot major subdivision to be known as DOROSHENKO A-1 DPUD Contacts: Applicant Land Owner Land Owner Private Surveyor B. Doriot & Associates, Inc. Igor Doroshenko & Nina Andriy & Katya Doroshenko B. Doriot & Associates, Inc. P.O. Box 465 Mamalat Doroshenko, Husband 58143 Hooley Dr P.O. Box 465 New Paris, IN 46553 & Wife Goshen, IN 46528 New Paris, IN 46553 58143 Hooley Dr Goshen, IN 46528 20-06-24-326-009.000-009 Site Address: 00000 Cr 118 Parcel Number: GOSHEN, IN 46528 Concord Township: SOUTH SIDE OF CR 118, 1,700 FT. WEST OF OLD CR 17 Location: Subdivision: Lot# 4.62 129.79 1,152.78 Lot Area: Frontage: Depth: Zoning: A-1, A-1 NPO List: Present Use of Property: VACANT LAND Legal Description: Comments: Applicant Signature: Department Signature:









DOROSHENKO A-1 DPUD AN 8 LOT RESIDENTAL SUBDIVISION Located in the Southwest Quarter of Section 24, Concord Township, Elkhart County, Indiana

C. Blake Doriot, Professional Land Surveyor IN #LS80890028 B. Doriot & Associates Inc. PO Box 465 New Paris, IN 46528 574-536-3031, doriotsurvey@gmail.com,

Owner Operators Andriy & Katya Doroshenko Igor & Nina Mamalat. 58143 Hooley Dr Goshen, IN 46528

A-1 DPUD NARRATIVE In SW1/4 Section24 T37N T5E

This is an eight (8) lot Residential development. It will consist of two (2) Single Family Lots and six (6) Duplex Lots. The Single Family lots to initially be occupied by the Doroshenkos and Mamalat families (owners). The 6 duplex lot are to be constructed as directed by the Doroshenkos and the Mamalats owners of the property. It is anticipated the units will initially be owned and operated by the owners. But in the future they could be transferred in one block or as individual Lots.

Reason for location the owners live in the area with friends close. The rear of the property seams ideal for locating their personal homes and raising their children

PROPERTY DESCRIPTION

A part of the Northeast Quarter of the Southwest Quarter of Section 24, Township 37 North, Range 5 East, Second Principal Meridian, Concord Township, Elkhart County, Indiana, containing 7.80 acres, more or less, being the Land described in Document #2023-09782, and based on an Original Survey, by B. Doriot & Associates Land Surveying (C. Blake Doriot P.S. 890028), Job #2024-063, all bearings based on Indiana State Planes East, completed on January 10, 2025, more particularly described as follows:

Commencing at a Harrison Monument marking the Northeast Corner of said Southwest Quarter; thence North 89 degrees 18 minutes 23 seconds West, along the North Line of said Northeast Quarter of the Southwest Quarter, to a 3/4" Iron Rebar in the Pavement of County Road 118, a distance of 290.00 feet, being the POINT OF BEGINNING of this description; thence continuing along the last called line and bearing, to a 3/4" Iron Rebar in the Pavement of County Road 118, a distance of 129.97 feet; thence South 00 degrees 02 minutes 10 seconds West, to an Iron Rebar with cap (DORIOT 890028), a distance of 240.00 feet; thence North 89 degrees 18 minutes 23 seconds West, to an Iron Pipe, a distance of 100.00 feet; thence South 00 degrees 02 minutes 10 seconds West, to an Iron Pipe, a distance of 912.78 feet; thence South 89 degrees 40 minutes 23 seconds East, to an Iron Pipe, a distance of 349.07 feet; thence North 00 degrees 17 minutes 14 seconds West, to an Iron Rebar with cap (DORIOT 890028), a distance of 850.60 feet; thence North 89 degrees 18 minutes 23 seconds East, to an Iron Rebar with cap (DORIOT 890028), a distance of 115.00 feet; thence North 00 degrees 07 minutes 57 seconds East, a distance of 300.00 feet, to the POINT OF BEGINNING; subject to all easements, restrictions, drain tiles, public highways, and right-of-ways of record.

DOROSHENKO 2/2

ZONING Site A-1 Adjoiners all A-1

Lots and Structures

Duplex lots are all over 30,000 Square Feet. These have room for 2 septic systems per living unit with 50' of separation from the wells.

Types of access to the duplexes are shown on the SDS (Sight Detail Sheet).

Examples of the anticipated types of homes for the Duplex Lots are included with the filing. They will be 2 story with separate entrances. Models will have a single car garage or a street side parking area with side walk entrance.

Single Family lots are just under 1 acre and meet County Lot Standards

Set Backs and Easements are as shown on the Plat and SDS.

Soils are Bronson BufA and Bristol BtxA both Sandy loam.

Septic systems will be all located in the Bristol soils. They will be in ground trench systems with area enough for 2 systems for each 3 bedroom living unit. Each living unit will be served by its own well that will be separated from all sceptics by a minimum of 50 feet as required by the health department.

Access will be provided in the common area to be 40 feet wide with 20 feet wide hard surface asphalt of concrete pavement. All pavement in the County Right of Way shall meet the Elkhart Highway standards. Entrance shall conform to Detail 6 in Elkhart County Highway Standards Drainage will be provided by roadside swales that will flow into lot line detention swales. The soils are mostly Bristol sand with a K saturation rate of approximately 15. With the change from cultivated field to sod reducing most of the site to a 0.10 run off coefficient. It is highly unlikely any water generated on this site will leave the site. Final entrance, drive and drainage plans will be submitted the county after the approval of the PUD.

Common areas and the drive shall be maintained by the Doroshenkos and Mamalat families (owners). If any lot is sold by the Doroshenkos and Mamalat families (owners) Restrictive Covenants along with Drainage and Roadway Maintenance Agreements for the development will be recorded and cross referenced to the Plat and PUD ordnance.

Landscaping and buffering shall meet County Planning requirements.

Deviations

Lots to be accessed on a common plated entrance with no frontage on a Public Right of Way. Outside Lighting

Each property shall have a front yard lamp. Rear yard lighting shall be downward shining and focused on their lot.

Vertical Datum NGVD 83

Plan Commission Staff Report

Prepared by the Department of Planning and Development

Hearing Date: August 14, 2025

Transaction Number: DPUD-0352-2025.

Parcel Number(s): 20-15-04-200-009.000-018.

Existing Zoning: GPUD B-3.

Petition: For a zone map change from GPUD B-3 to DPUD B-3 and for primary approval of a 1-lot minor subdivision to be known as NIPSCO NEW PARIS LOCAL OPERATIONS CENTER.

Petitioner: Fernbrook LLC, represented by DVG Team, Inc.

Location: Northwest corner of Fernbrook Rd. & CR 142, west of SR 15, in Jackson Township.

Adjacent Zoning and Land Uses: The following table shows the zoning and current land use for the subject property and adjacent sites.

	Zoning	Current Land Use	
Subject Property	GPUD B-3	Agricultural	
North	PUD A-1 & B-2	2 B-2 Vacant & Residential	
South	R-1 Residential		
East	B-2 & R-1	Commercial, Church, SR 15	
West	R-1	Agricultural	

Site Description: The subject property comprises one parcel totaling 50.89 acres and is currently vacant, used for agricultural production.

History and General Notes:

➤ **April 5, 2004** – The Board of County Commissioners approved a zone map change from R-1 to GPUD B-3 (PC 2004-13).

Zoning District Purpose Statements: The purpose of the DPUD, Detailed Planned Unit Development, Overlay zoning district is to allow an applicant the benefit of flexibility in development in exchange for increased public or private amenities that go beyond the requirements of the Development Ordinance. The purpose of the B-3, Heavy Business, zoning district is to accommodate higher-impact community and regional developments. The district also accommodates uses related to vehicular travel, interstate commerce, heavy equipment, trucking, and outdoor storage. The zoning district is appropriately applied adjacent to interstates and major state or county highways.

Staff Analysis: The purpose of this rezoning petition is to develop a regional service center for NIPSCO, which provides gas and electric utility services to the surrounding communities.

Plan Commission Staff Report (Continued)

Hearing Date: August 14, 2025

The staff, after reviewing this petition, recommends **APPROVAL** of this rezoning for the following reasons:

- 1. The requested Zoning Map Amendment complies with the Comprehensive Plan. Commercial development in the county should be directed to Urban Growth Areas and in designated transportation corridors, to take advantage of their proximity to municipal infrastructure. The property is in the New Paris area and located along SR 15.
- 2. The request is in character with current conditions, structures, and uses on the subject property and in its surroundings. The subject property is in a mixed-use area consisting of commercial, residential, and agricultural uses.
- 3. The most desirable use of the subject property is commercial and/or other compatible and supporting uses. The subject property was identified for future commercial use in 2005 and is adjacent to existing commercial use.
- 4. The request conserves property values by allowing a proposed commercial property to develop under the appropriate zoning district, which will meet and or exceed development standards such as buffering and screening.
- 5. The proposed rezoning promotes responsible growth and development. The DPUD limits the use and details contained in the petition, site plan/support drawing, and PUD ordinance. The property will be served by public sewer from the New Paris Conservancy District.

Staff Analysis Continued: The staff, after reviewing this petition with the assistance of the Elkhart County Technical Committee, recommends **APPROVAL** of this DPUD and primary plat as the development meets all pertinent standards.

DPUD-0352-2025

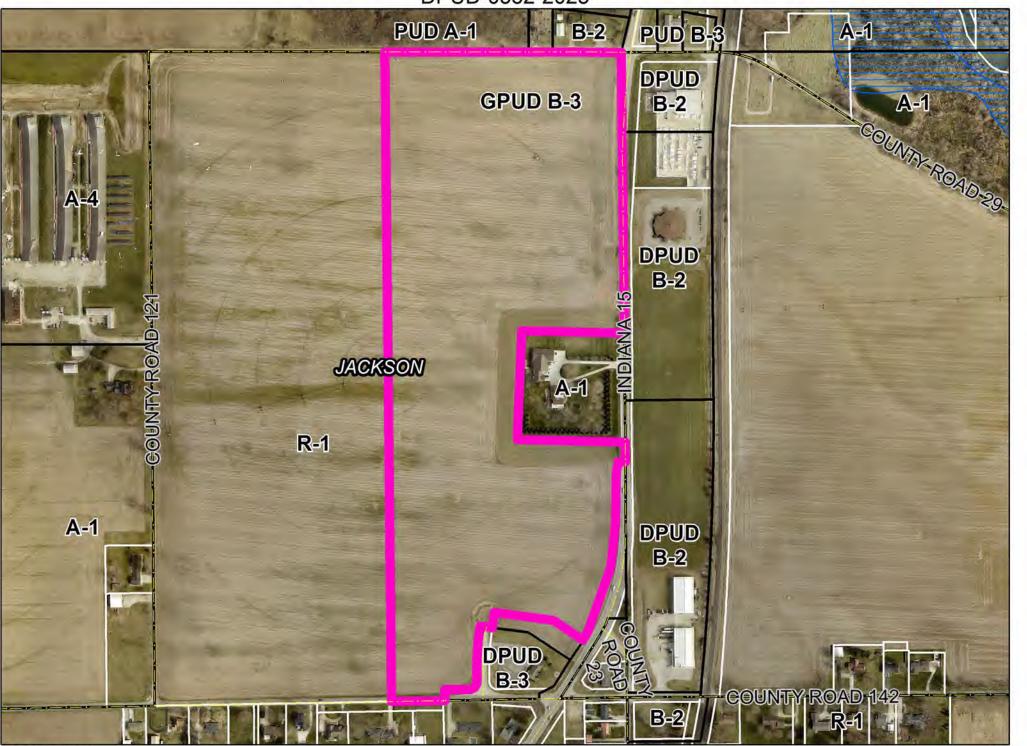
PLAN COMMISSION & BOARD OF ZONING APPEALS

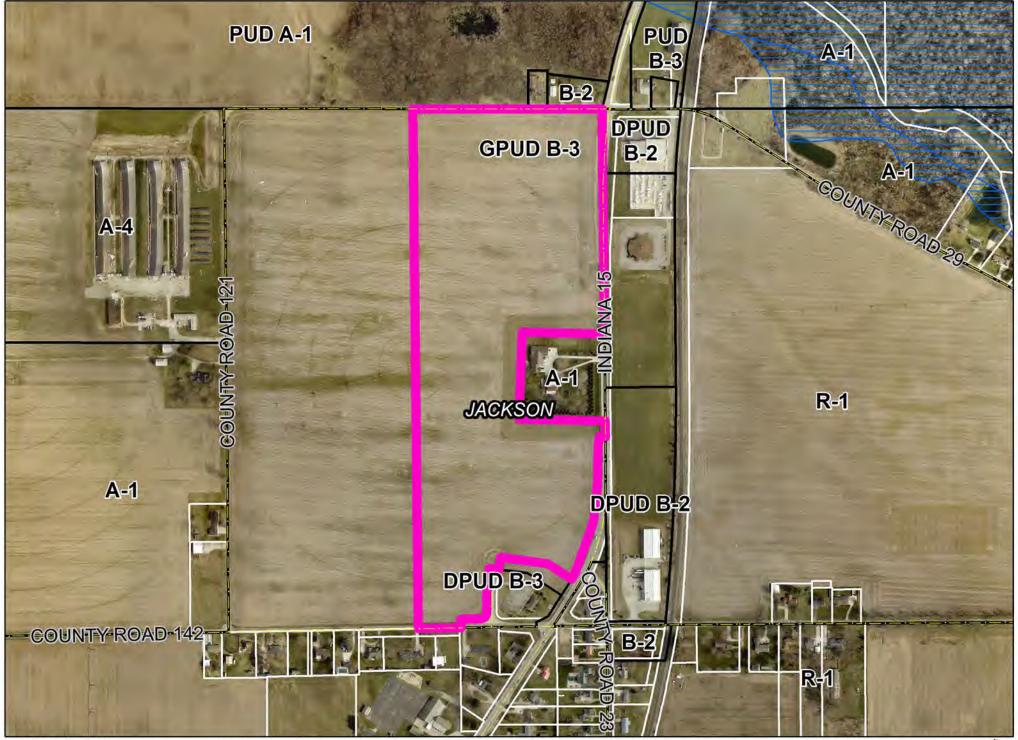
Elkhart County Planning & Development Public Services Building

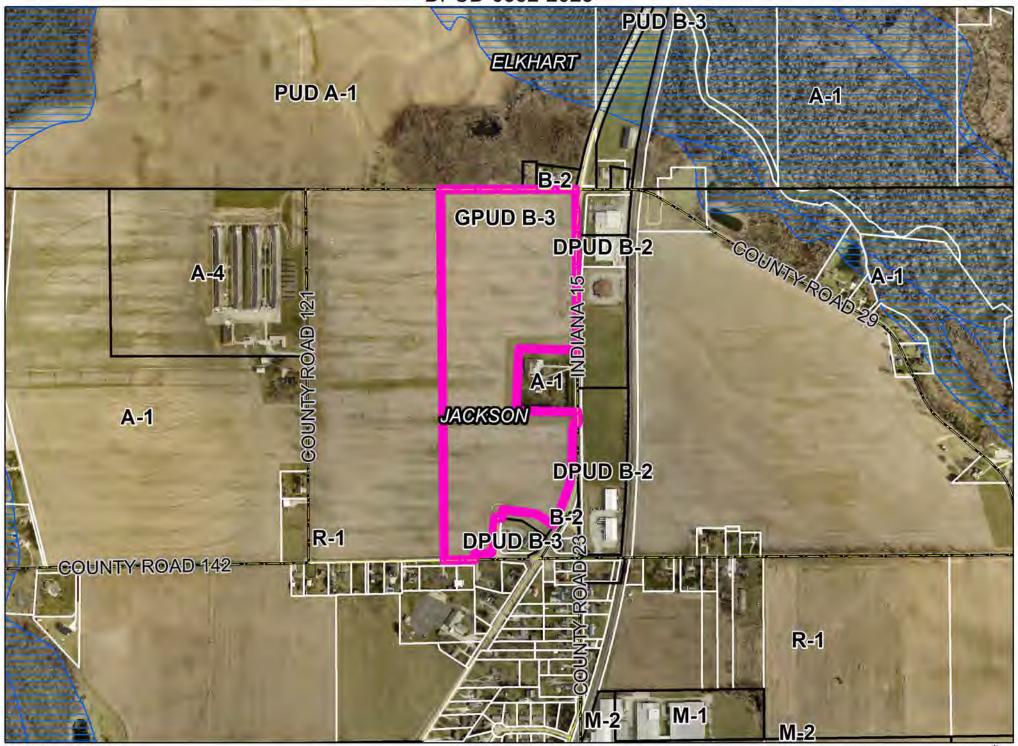
4230 Elkhart Road, Goshen, Indiana, 46526 Phone - (574) 971-4678 Fax - (574) 971-4578

Detailed PUD - Rezoning, Plat & Site Plan

August 14, 2025 05/30/2025 DPUD-0352-2025 Date: Meeting Date: Transaction #: Plan Commission Hearing (PUD) Description: for a zone map change from GPUD B-3 to DPUD B-3 and for primary approval of a 1-lot minor subdivision to be known as NIPSCO NEW PARIS LOCAL OPERATIONS CENTER Contacts: Applicant **Applicant** Land Owner Private Surveyor Nipsco Dvg Team, Inc Fernbrook Llc Dvg Team, Inc 801 E 86Th Ave 1155 Troutwine Rd 1155 Troutwine Rd 67742 County Road 19 Merrillville, IN 46410 Crown Point, IN 46307 Goshen, IN 46526 Crown Point, IN 46307 20-15-04-200-009.000-018 Site Address: 00000 Fernbrook Rd Parcel Number: NEW PARIS, IN 46553 Township: Jackson NORTHEAST CORNER OF FERNBROOK RD AND CR 142, WEST OF SR 15 Location: Subdivision: Lot# Lot Area: Frontage: Depth: A-1, B-3 NPO List: Zoning: Present Use of Property: Legal Description: SEE PREVIOUS RZ-0307-2019 (RE-ZONING FROM GPUD B-3 and R-1 to A-1 APPROVED ON 6/13/2019 (PARCEL HAS Comments: SINCE BEEN SPLIT) AND SUP#0280-2019 FOR HOME WORKSHOP BUSINESS, APPROVED 5/16/2019 Applicant Signature: Department Signature:



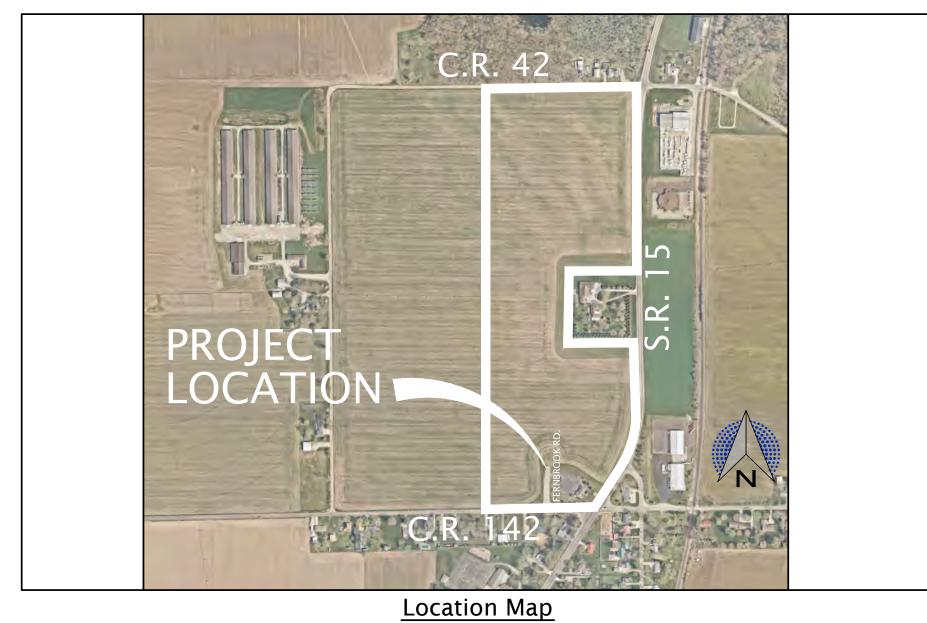




NIPSCO New Paris Local Operations Center

New Paris, IN

ISSUED FOR DPUD RESUBMITTAL- 06/27/25



BENCHMARK

CUT "X" ON TOP OF CURB LOCATED AT NORTH END OF FERNBROOK ROAD ELEVATION = 812.38 (NAVD88)

Know what's below.Call before you dig.

To Submit a Locate Request 24 Hours a Day, Seven Days a Week: Call 811 or 800-382-5544 www.Indiana811.org

INDEX OF SHEETS

C001	Cover Sheet
C101	Existing Conditions
C102	Demolition Plan
C103	Overall Site Plan
C103A-B	Site Plan
C104A-B	Grading Plan
C105A-B	Utility Plan
C106	Stormwater Pollution Prevention Plan (SWPPP)
C107	Site Lighting Plan
C108	Landscape Plan
C109	C.R.142 & Fernbrook Road Improvements
C201-C208	Construction Details
C301-C304	SWPPP Details

LEGEND

©	EXISTING DRAINAGE STRUCTURE	700	EXISTING CONTOURS
	EXISTING END SECTION	700	PROPOSED CONTOURS
©	EXISTING SANITARY STRUCTURE		BOUNDARY LINES
Ø	EXISTING FIRE HYDRANT		RIGHT-OF-WAY LINES
•	EXISTING VALVE & BOX		PROPOSED LOT LINES
BB 63	EXISTING B-BOX		UNDERLYING LOT LINE
-	EXISTING STREET LIGHT		EASEMENT LINES
→ 1	POWER POLE		BUILDING LINES
SBC	SBC PEDESTAL	xxx	CHAINLINK FENCE
MB	MAIL BOX		ORNAMENTAL FENCE
⊚	PROPOSED DRAINAGE STRUCTURE	—— OHW ———	OVERHEAD POWER LINES
D	PROPOSED END SECTION		TELEPHONE ROUTE
©	PROPOSED SANITARY STRUCTURE		ELECTRIC ROUTE
¥	PROPOSED FIRE HYDRANT	— G — — — —	GAS ROUTE
\boxtimes	PROPOSED VALVE & VAULT		EXISTING WATER
@	PROPOSED VALVE & BOX	- >>	EXISTING STORM
BB ⊗	PROPOSED B-BOX	>	EXISTING SANITARY
معلا	PROPOSED STREET LIGHT	w	PROPOSED WATER
→	DIRECTION OF FLOW	— <u>)</u>	PROPOSED STORM
1 -		`	PROPOSED SANITARY
-	OVERLAND FLOOD ROUTE	•	
000.00 T/W	PROPOSED TOP RETAINING WALL ELEV	/ATION	
✓ 000.00 B/W	PROPOSED FINISHED GROUND GRADE	AT BOTTOM OF RETAINING ELEVATION	
000.00 000.00	PROPOSED TOP OF CURB ELEVATION PROPOSED GUTTER FLOWLINE ELEVAT	TION	
000.00	PROPOSED SURFACE ELEVATION		
	PROPOSED		
	CB.#1 /48"Ø	TYPE & LABEL/DIAMETER	
STORM SEWER	1022Z1, 1020M1 R: 100.00	TYPE OF FRAME & COVER RIM ELEVATION	
	I: 95.00 (W) I: 94.00 (E)	PIPE INVERT AND DIRECTION PIPE INVERT AND DIRECTION	
	, 3 (2)	THE INVENT AND DIRECTION	
	SAN.MH A /48"Ø	TVDE 0 LAREL/DIAMETER	
SANITARY		TYPE & LABEL/DIAMETER TYPE OF FRAME & COVER	
SEWER	/ I: 94.00 (W)	RIM ELEVATION PIPE INVERT AND DIRECTION	
	I: 93.90 (E)	PIPE INVERT AND DIRECTION	
WATER	FH #1 G: 100.0	FIRE HYDRANT & NUMBER LABEL GROUND ELEVATION	
WAILN		S. SOND ELEMATION	
	V.B #1	V.B. FOR VALVE ROV AND V.V. FOR VALVE W	NAULT.
	W/ 6" GATE VALVE G: 100.0	V.B FOR VALVE BOX AND V.V FOR VALVE IN SIZE OF GATE VALVE OR TAPPING SLEEVE	VAULI
	T/P: 95.0	GROUND ELEVATION TOP OF PIPE ELEVATION	

PROJECT CONTACTS

SCHOOL DISTRICT Fairfield Community Schools 67240 County Road 31 Goshen, IN 46528 info@fairfield.k12.in.us (574) 831-2188	SANITARY SEWER UTILITY New Paris Conservancy District 18121 County Road 29 New Paris, IN 46553 npcdsmith6100@yahoo.com (574) 831-6100
WATER UTILITY WELL	CABLE UTILITY Quality Cablevision 19066 E Market Street
ELECTRIC & GAS UTILITY NIPSCO	New Paris, IN 46553 (574) 831-2225
801 E 86th Ave	` ,
Merrillville, IN 46410	TELECOM UTILITY
1-800-464-7726	NPTech 19066 E Market Street
DEVELOPER/OWNER	New Paris, IN 46553

info@nptel.com

(574) 831-2176

801 E 86th Ave Merrillville, IN 46410 1-800-464-7726

ENGINEERING PLAN SET

REVIEW AGENCY: ELKHART COUNTY, IN SUBMITTAL TYPE: DPUD ZONING SUBMITTAL MEETING DATE: TBD APPROVAL DATE: TBD

D

T E A M I N C

1155 Troutwine Road
Crown Point, IN 46307
P: (219) 662-7710
F: (219) 662-2740
www.dvgteam.com

SCALE: 1" = 100'

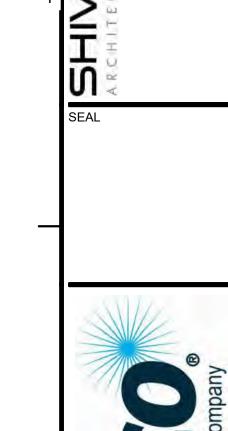
NISOURCE - NEW OPERATIONS CENTE

A NiSource Com



0' 50' 100' SCALE: 1" = 100'

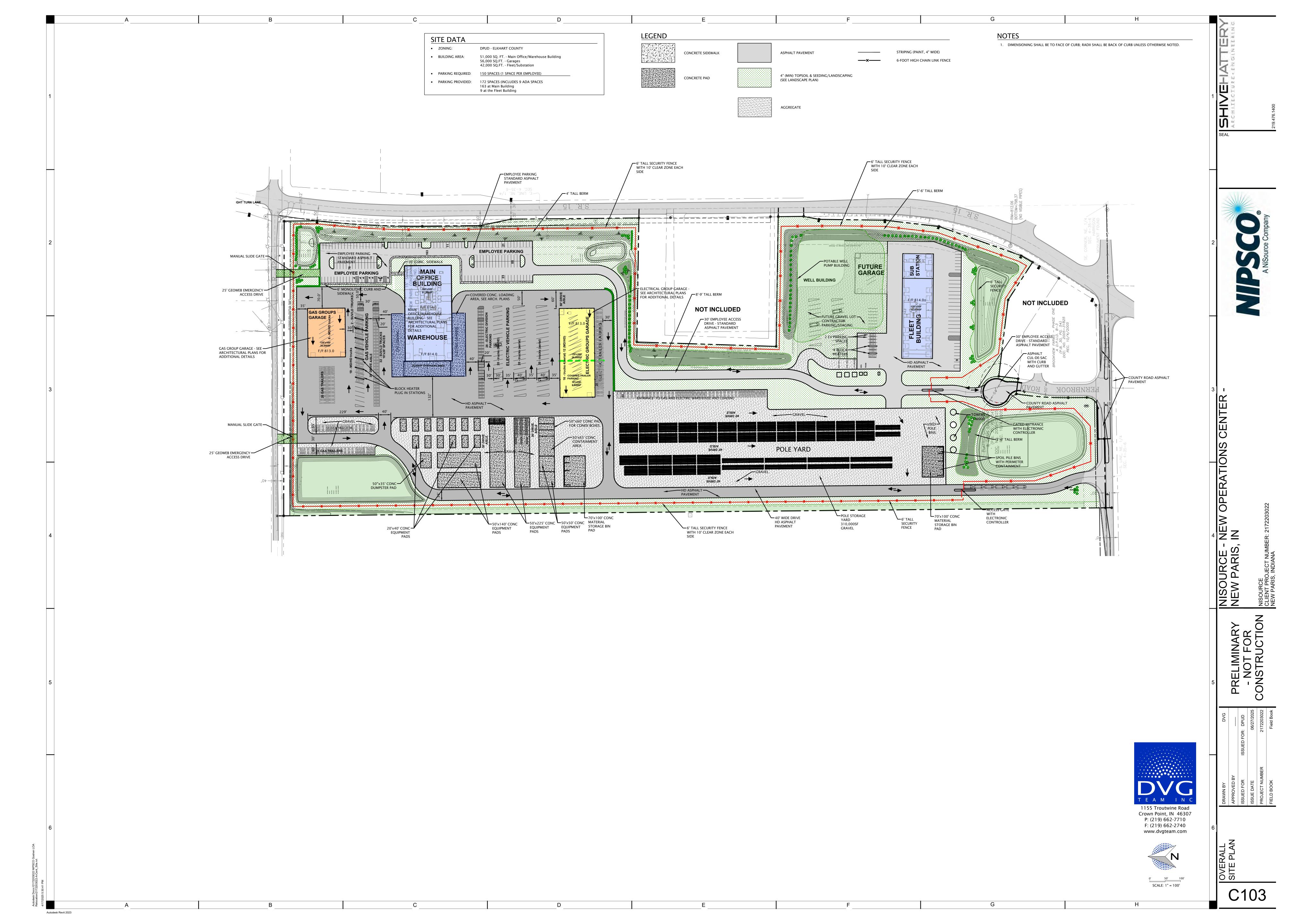


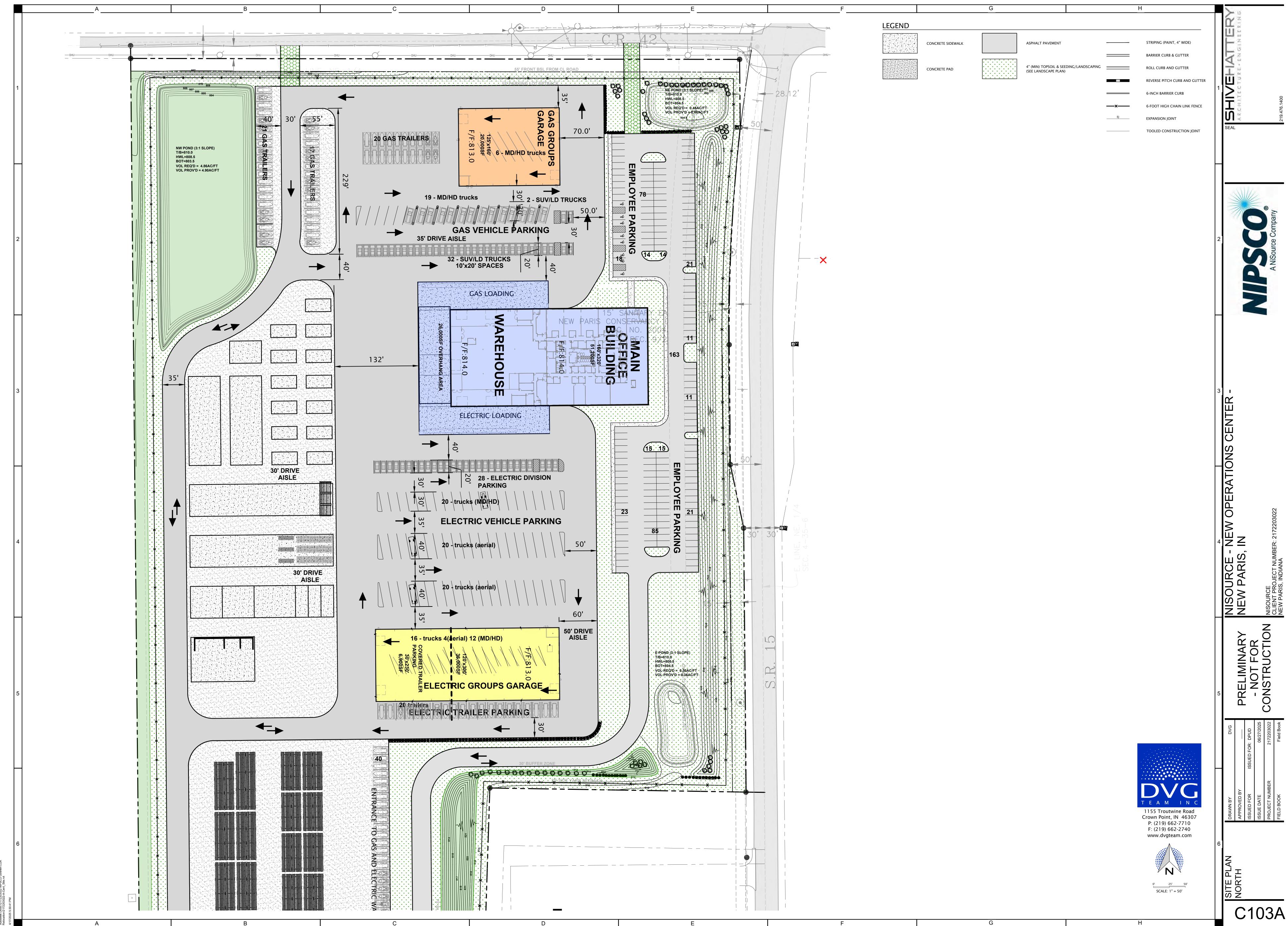


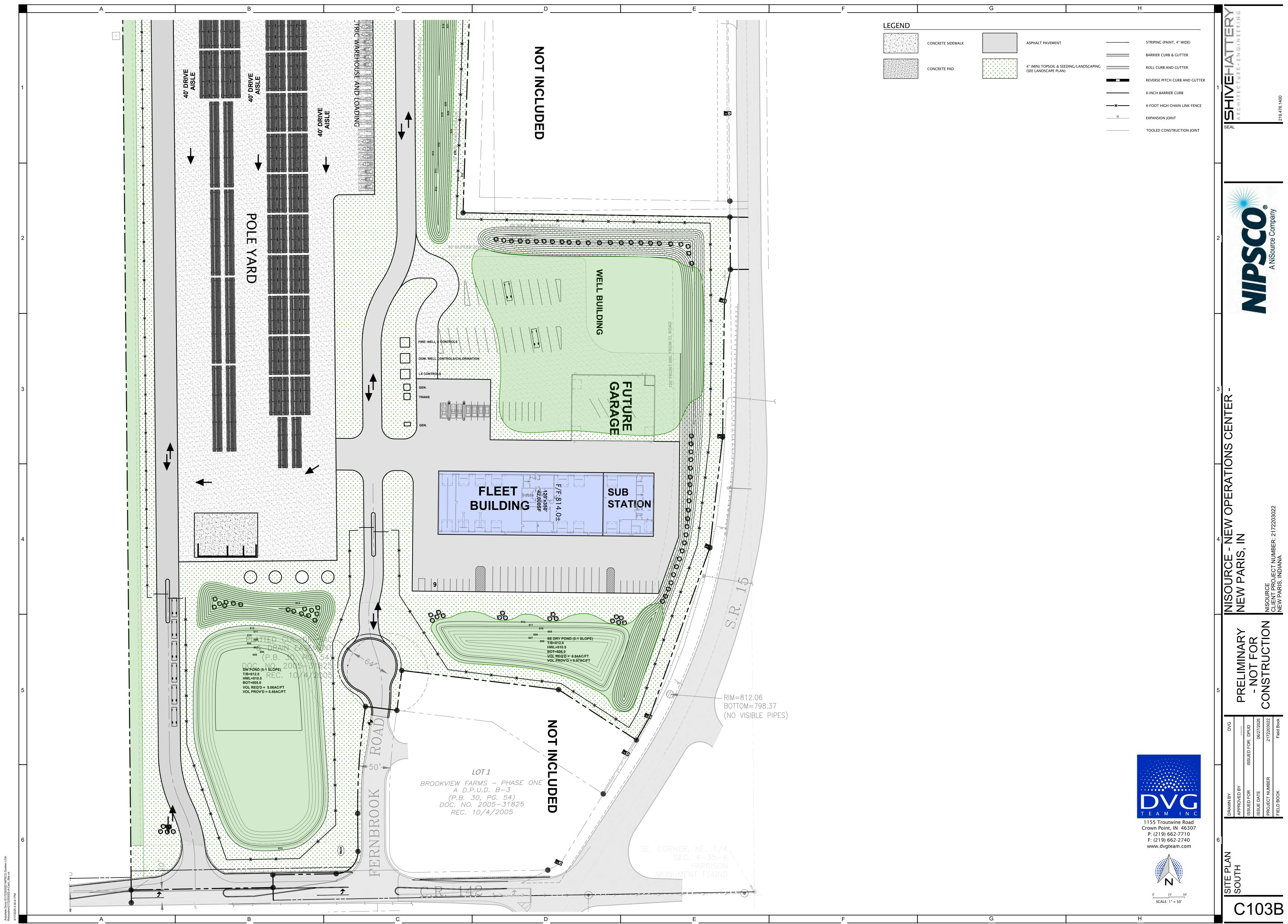
 $\cdot \, X \cdot X \cdot$

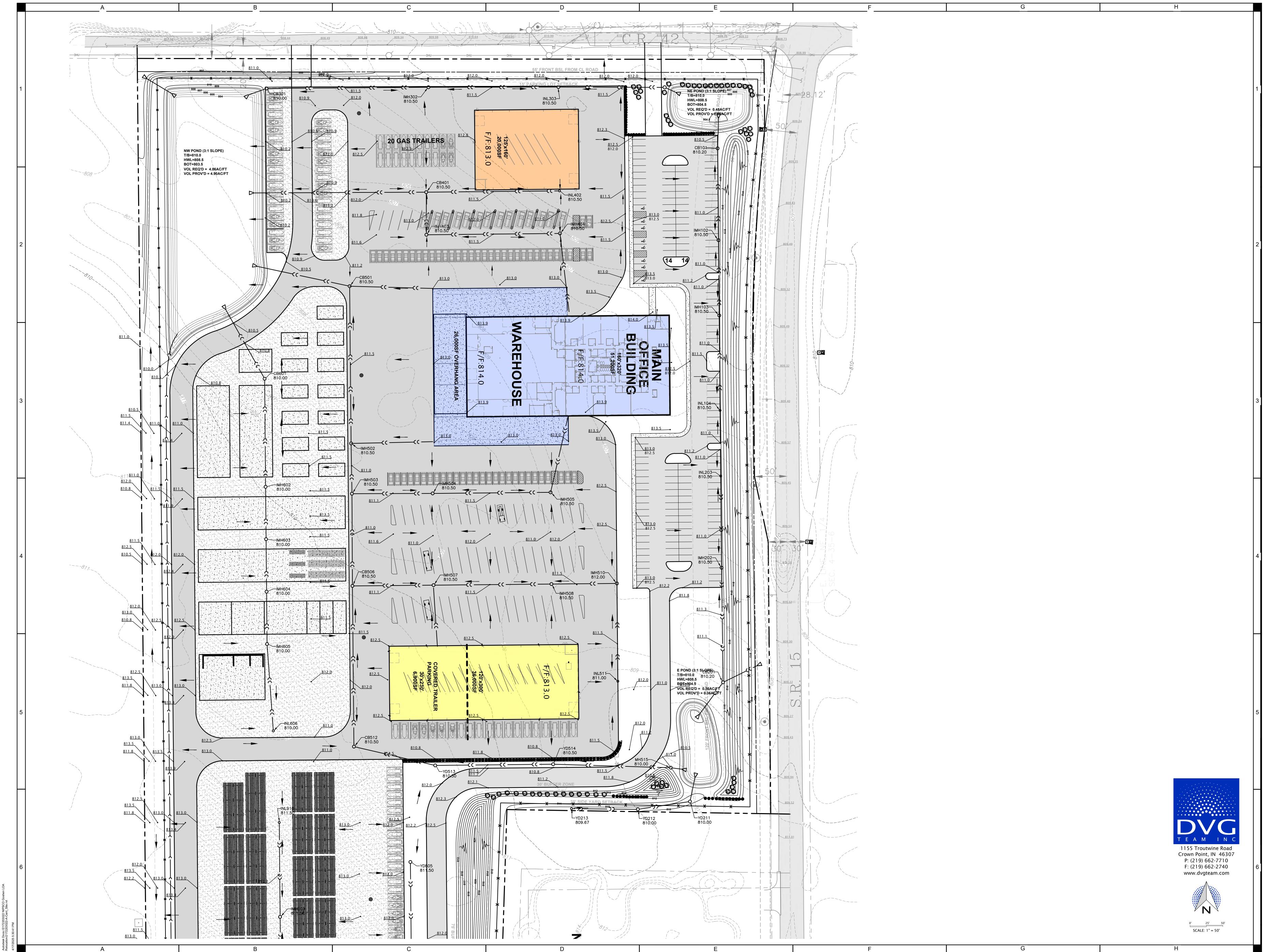
. /. /. / .

C D E F

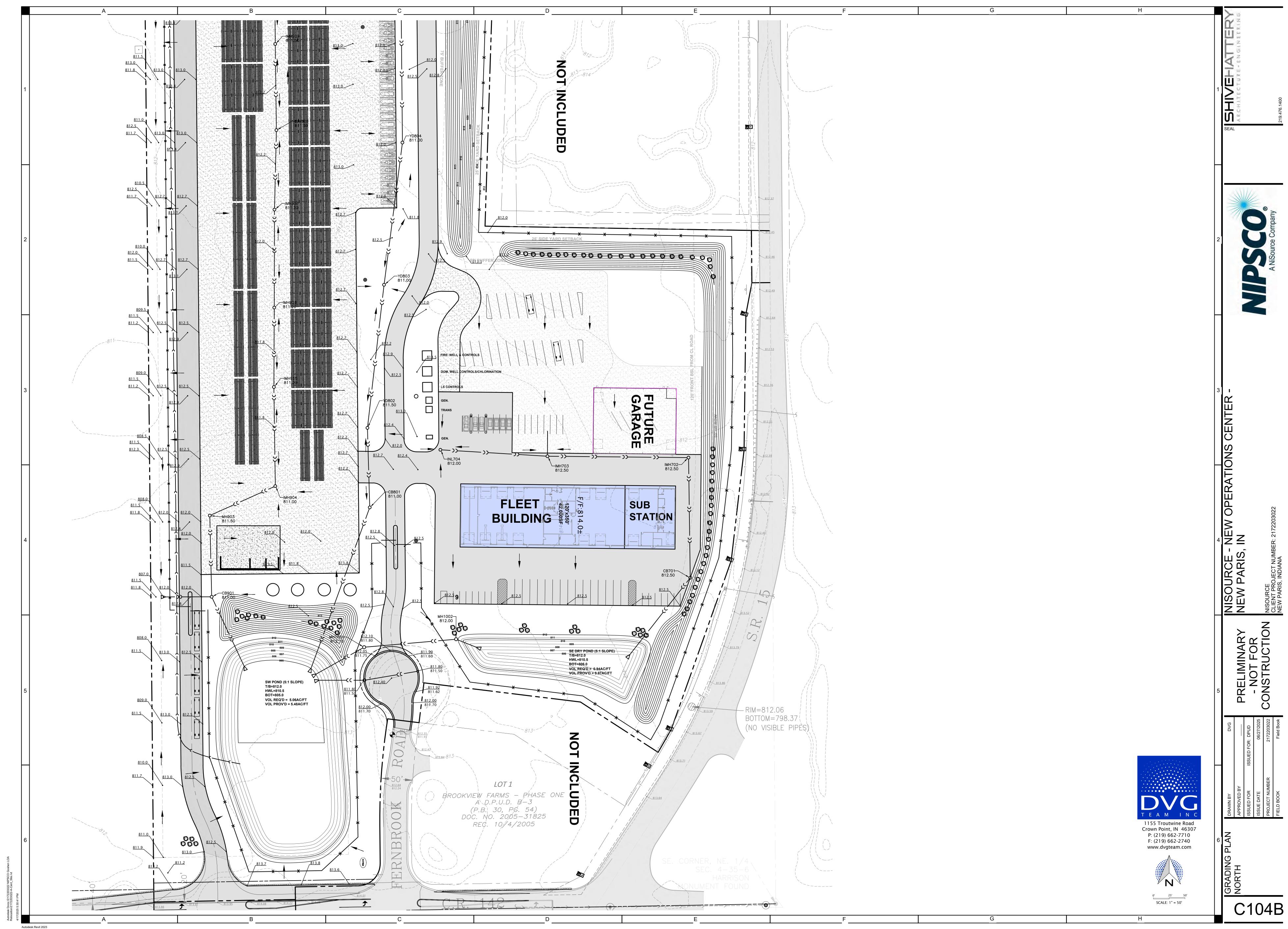


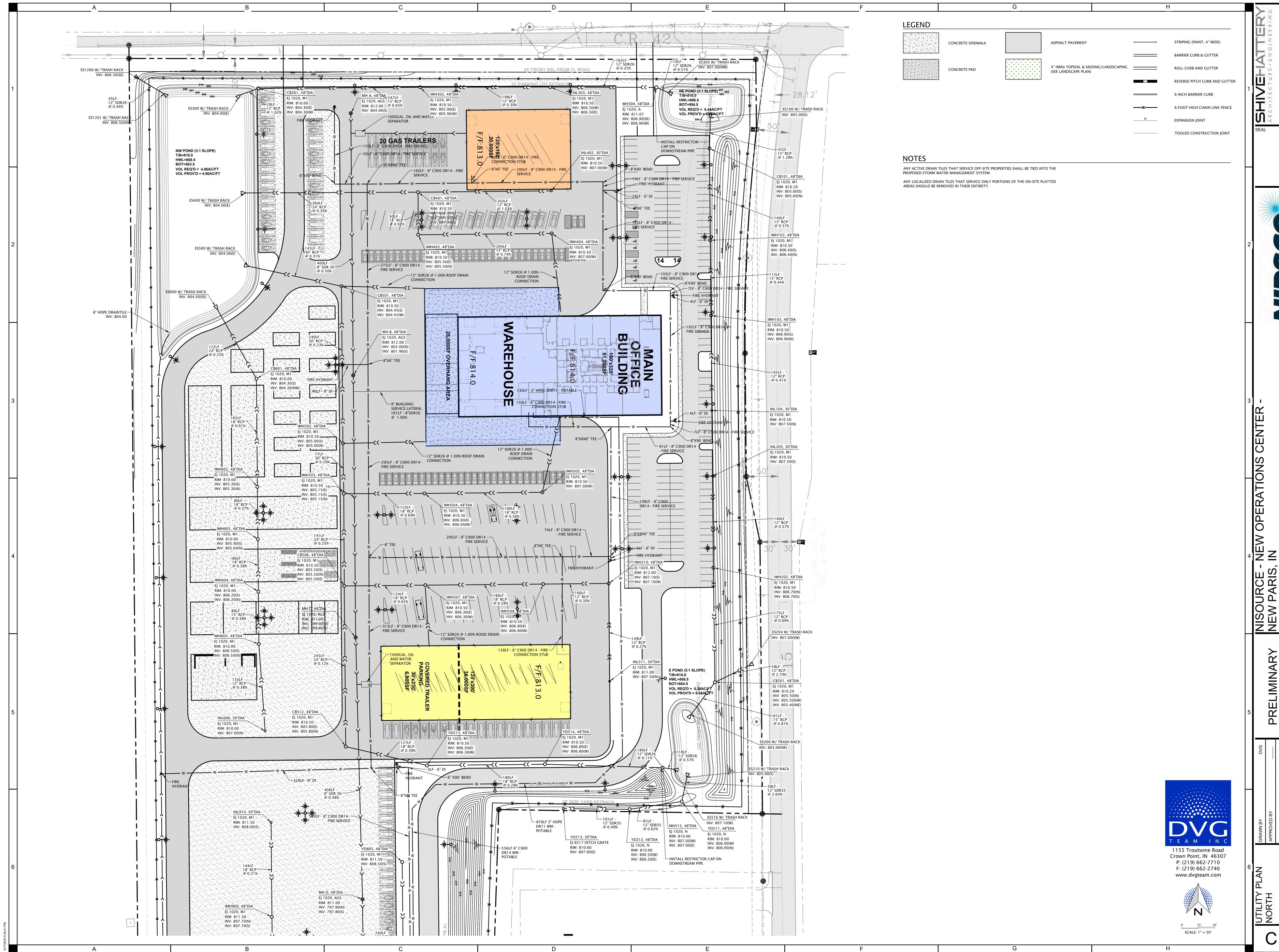




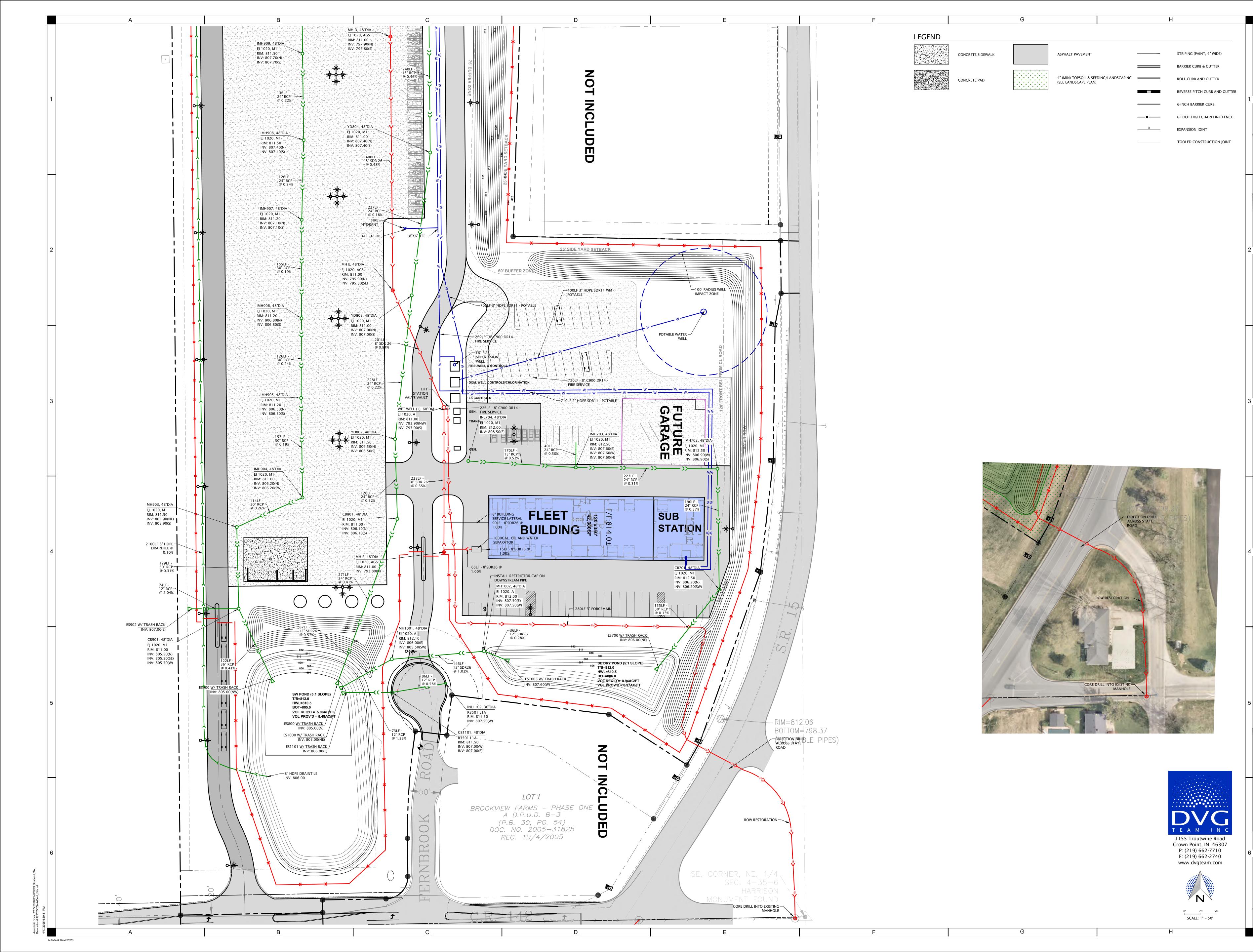


C104A





C105A



C105B

TOTAL DISTURBANCE 2. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND/OR CLEANING TO THE STRUCTURE OR INLET BARRIER PROTECTION CONCRETE WASHOUT 6. THE SOIL STOCKPILE SHALL BE PROTECTED BY SILT FENCE/FIBER ROLLS SURROUNDING THE PILE AND THE PILE FEATURE. CORRECTIVE WORK INCURRED BY THE CONTRACTOR SHALL BE CONSIDERED CONCRETE AREA = 51.0acINCIDENTAL TO THE CONTRACT. SHALL BE TEMPORARILY SEEDED IF THE STOCKPILE REMAINS DORMANT FOR GREATER THAN 7 DAYS. THE PILE SHALL BE STABILIZED WITHIN 14 DAYS. TEMPORARY/PERMANENT SEEDING **BUILDING & STORMWATER PERMITS** 3. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE S.W.P.P.P. ANY FINES OR PUNITIVE MEASURES INCURRED BY THE PROJECT DUE TO FAILURE TO COMPLY WITH THE S.W.P.P.P. ARE THE DURING SOIL-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL CREATE DIVERSION SWALES AND INSTALL WASHOUT RESPONSIBILITY OF THE CONTRACTOR. THESE COSTS SHALL BE CONSIDERED INCIDENTAL TO THE DITCH CHECKS SO THAT ALL SITE RUNOFF PASSES THROUGH AN EROSION CONTROL MEASURE PRIOR TO BEING CONTRACT AND SHALL NOT BE CONSIDERED AN EXTRA. 4. DURING THE COURSE OF CONSTRUCTION, THE LOCAL ENFORCEMENT OF THE S.W.P.P.P. MAY 8. UPON COMPLETION OF THE ROUGH GRADING, ALL AREAS AFFECTED BY CONSTRUCTION SHALL BE SILT WORM DITCH CHECK, 9" DIA. (SEE SHEET C302) EROSION CONTROL BLANKET REQUIRE ADDITIONAL EROSION CONTROL MEASURES TO BE INSTALLED TO ADDRESS SITE-SPECIFIC TEMPORARILY SEEDED IF THEY WILL REMAIN DORMANT FOR GREATER THAN 7 DAYS. THESE AREAS SHALL BE ITEMS NOT ANTICIPATED BY THIS PLAN. THESE ITEMS ARE CONSIDERED AN EXTRA TO THE STABILIZED WITHIN 14 DAYS OF REMAINING DORMANT AND EROSION CONTROL BLANKETS SHALL BE CONTRACT, BUT ONLY TO THE EXTENT OF INITIAL INSTALLATION. CORRECTIVE WORK AND INSTALLED ON SIDE SLOPES AS SHOWN ON THE PLANS. RIP RAP PIPE OUTFALL ARMORMENT - SEE SHEET C302 FOR DETAIL OF RIPRAP AT MAINTENANCE SHALL BE CONSIDERED INCIDENTAL AND SHALL NOT BE CONSIDERED AN EXTRA. CONTRACTOR SHALL PERFORM STREET SWEEPING WHENEVER TRACKING OF MUD, DIRT, AND CONSTRUCTION DEBRIS OCCURS ON THE PUBLIC ROAD. PIPE END SECTION CONCRETE WASHOUT SIGNAGE GHT TURN LANE NOT INCLUDED **NOT INCLUDED** WAREHOUSE F/F:814.0__

D

NOTES

THE SITE CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN DURING DEMOLITION AND CONSTRUCTION

ACTIVITIES. MEASURES MUST BE IMPLEMENTED PRIOR TO BEGINNING CONSTRUCTION.

5. THE SITE CONTRACTOR SHALL INSTALL THE CONSTRUCTION ENTRANCE AND PLACE PERIMETER SILT FENCING/FIBER ROLLS PRIOR TO COMMENCING ANY SOIL DISTURBANCE. SEE SITE PLAN FOR LOCATIONS. THE

CONSTRUCTION ENTRANCE SHALL SERVE AS SITE ACCESS FOR ALL CONSTRUCTION TRAFFIC INGRESS AND

LEGEND

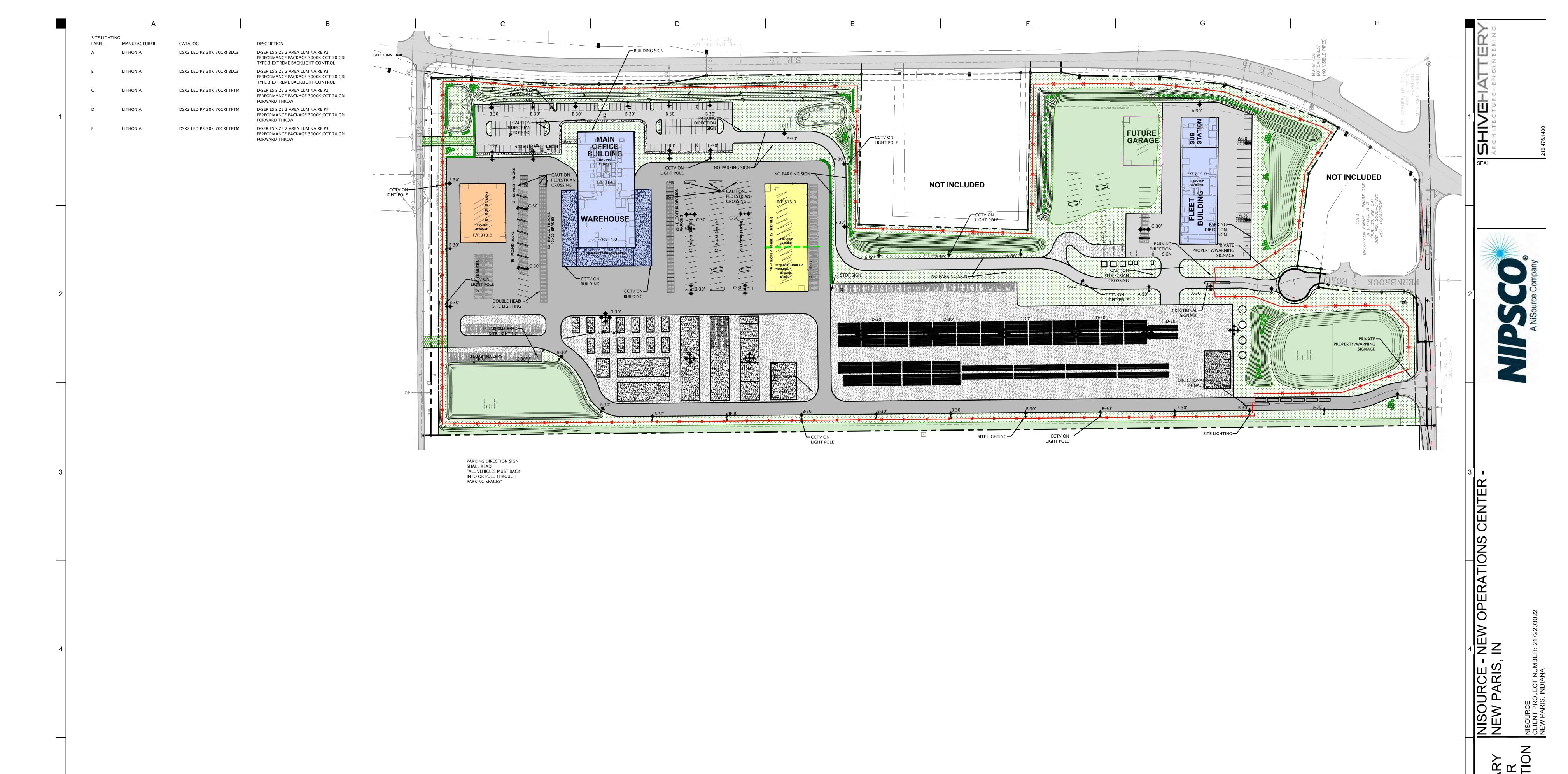
TEMPORARY CONSTRUCTION ENTRANCE





0' 50' 100' SCALE: 1" = 100'

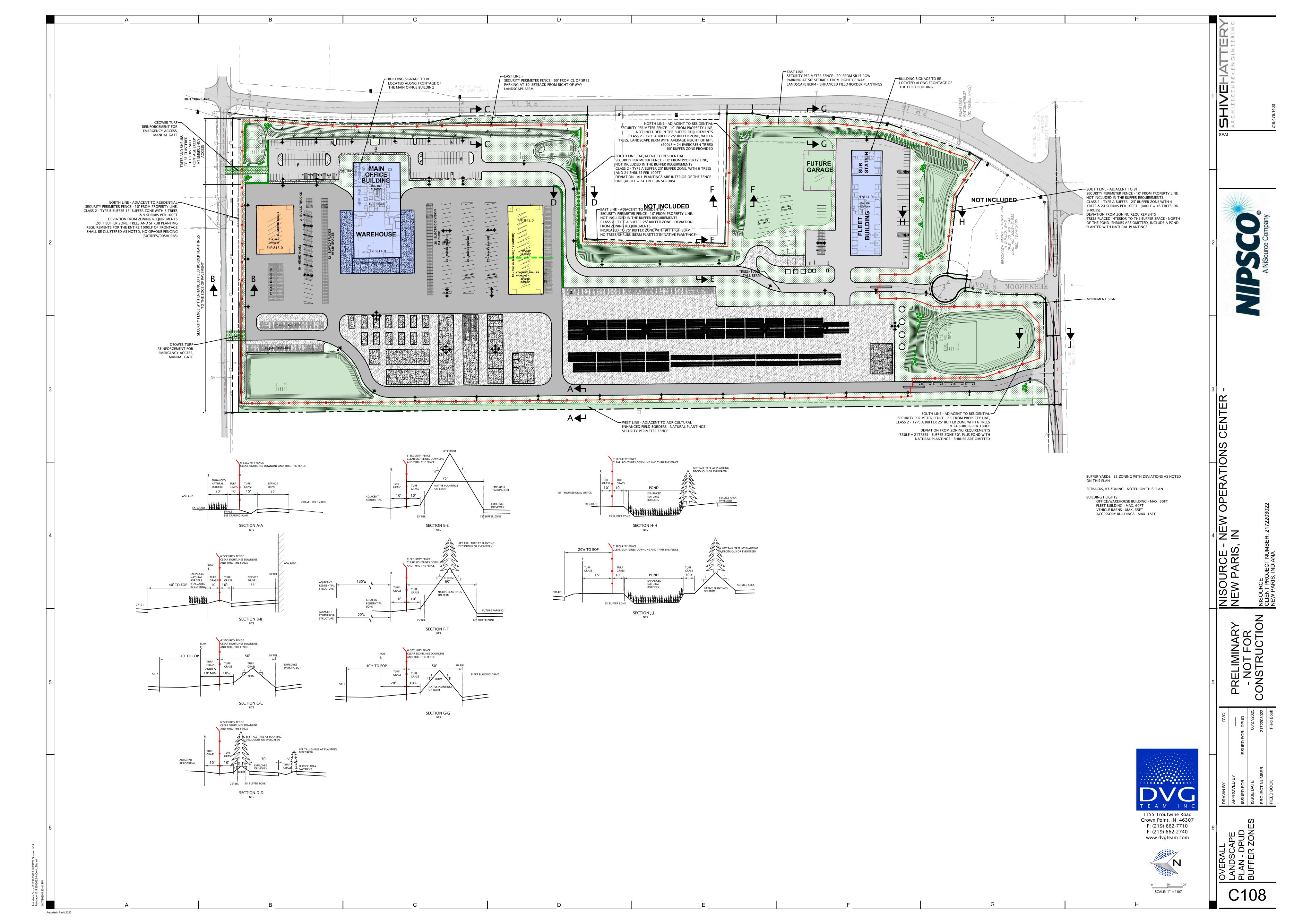
C106



D

1155 Troutwine Road Crown Point, IN 46307 P: (219) 662-7710 F: (219) 662-2740 www.dvgteam.com

SCALE: 1" = 100'





0' 25' 50' SCALE: 1" = 50'



MILL AND RESURFACE EXISTING C.R. 142

PROPOSED IMPROVEMENTS TO C.R. 142 & FRENBROOK ROAD

VOL REQ'D = 0.94AC/FT VOL PROV'D = 0.97AC/FT SW POND (5:1 SLOPE) HWL=810.5 BOT=805.0 VOL REQ'D = 5.06AC/FT VOL PROV'D = 5.48AC/FT RIGHT OF WAY DEDICATION 2' STONE SHOULDER — PASSING BLISTER — FOR LEFT TURN ADJUSTED NORTH / DOUBLE 4" YELLOW — DOUBLE 4" YELLOW —

EXISTING CONDITIONS

LEGEND ASPHALT PAVEMENT - ELKHART COUNTY HIGHWAY DEPARTMENT (SEE LANDSCAPE PLAN)

STANDARD PAVEMENT CROSS SECTION

4" (MIN) TOPSOIL & SEEDING/LANDSCAPING

TO COMMENCING WORK.

 ALL WORK IN PUBLIC RIGHT OF WAY TO BE COORDINATED WITH THE ELKHART COUNTY HIGHWAY DEPARTMENT PRIOR ALL WORK ON FERNBROOK DRIVE
 SHALL BE COORDINATED WITH THE DENTAL OFFICE, ACCESS TO THEIR SITE SHALL BE MAINTAINED.

SITE DEVELOPMENT COMMON EXCAVATION AND EARTHWORK GENERAL SPECIFICATIONS

A Geological Investigation report by AES dated April 25, 2025 shall be considered a part of this plan set.

1.0 Quality Assurance:

- 1. Contractor shall notify the Construction Manager, Architect, Engineer and testing laboratory inspector when common excavation and earthwork is scheduled. Earthwork operations which require inspecting and testing by testing laboratory inspector shall not be performed unless testing laboratory inspector is present. 2. Contractor shall provide a 1-year warranty against settlement and damage caused by settlement for common excavation
- and earthwork. 3. If settlement occurs within 1 year after the date of Substantial Completion, the Contractor shall remove the affected surface feature, provide additional suitable fill, thoroughly compact and restore the surface feature to its original undisturbed condition.

- 1. An inspector from the Owner's soils testing laboratory shall, during the common excavation work operations, provide the following services:
 - a. Test & Classify on-site excavated soils for reuse as topsoil, common site fill, embankment fill and structural fill.
- b. Test materials furnished from any off-site sources to verify compliance with specified requirements. c. Observe proofing rolling of exposed subsoil in areas where grades will be raised and provide recommendations for soil correction to ensure that unstable materials have been removed.
- d. Inspect placement and compaction of common site fill, embankment fill and structural fill to ensure the material being compacted is in accordance with specified requirements. For each lift, a minimum of 1 density test for every 10,000 square feet of lawn surface area, and 5,000 square feet of paved surface area, and 500 square feet of
- proposed building area is required. e. Density tests are required for all subgrade/subsoil in areas that have been cut to rough grade elevations, after soils
- have been compacted to ensure soil compaction density is in accordance with the specified requirements. Test frequency shall be as described above in sub-paragraph 1.d.. 2. Tests and analysis of fill materials shall be performed in the laboratory in accordance with ASTM D1557.

3. Testing shall be performed as directed by the Soils Report Engineer. Compaction Testing shall be performed in

3.0 Special Weather Protection:

1. Construction shall be limited during cold weather to prevent the formation of frost and snow accumulation to occur in materials used for site fill or in soils where site excavation is taking place. All areas that are scheduled for excavation activity shall be protected from freezing and snow accumulation. Any frozen material shall be removed and disposed of

- 4.0 Clearing & Grubbing: 1. Contractor shall provide all clearing, grubbing, removal and disposal of all vegetation and debris related to the existing
- 2. Vegetation debris shall be removed from site and transported to a local and state authorized disposal sites.

5.0 Top Soil Stripping:

- 1. The project has a depth of topsoil variation throughout the site. The geotechnical report shows the topsoil depths at several locations throughout the project site. The Contractor shall strip and stockpile all topsoil at the location
- designated in the Site Development Drawings or as directed by the owner. 2. Topsoil removal material shall consist of fertile, friable, organic surface soil stripped from the site and shall be free of
- subsoil, brush, turf grasses, weeds, roots, stumps, stones larger than 1-inch in diameter and other contaminated matter." 3. Topsoil shall be stockpiled so that it may be reused and re-spread on site over Lawn and Landscaped areas.

4. The topsoil stockpile area shall be properly protected against soil erosion into the adjacent drainage system.

accordance with ASTM D2922 and D3017.

- 6.0 Borrow Material/Embankment & Structural Fill Material: 1. Borrow material for structural fill shall be first excavated from on site source locations as defined by the Soils Report
- 2. Structural fill material shall be placed under all utility trench corridors, building pad locations, paved parking, driveway,
- sidewalk and roadway areas. 3. Common site and embankment fill shall be placed under lawn, landscape and detention pond areas.
- 4. Maintain moisture content of structural fill within plus or minus 3 percent of the optimum moisture content as
- determined by the Modified Proctor Test. 5. Contractor shall provide subgrade conditions meeting the design grades for pavements, exterior walks, curbs and
- 6. Contractor shall only place approved fill material under proposed building pads and parking areas 7. Contractor shall undercut any areas that do not meet the requirements for structural fill and shall replace with structural

7.0 Excavation:

- 1. Protect all existing natural features on site.
- 2. Install soil erosion prevention measures in accordance with local and state ordinances and in accordance with the soil erosion control project drawings. 3. All proposed contours shown on this set of plans are proposed surface elevation. All fill shall be placed as structural fill
- for buildings and parking lots. 4. Prior to excavation an on-site Pre-construction Meeting shall be held between the Engineer, Owner/Owner's
- Representative and General Contractor to discuss earthwork protocol.
- 5. During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if ordinarily encountered at the site, the party discovering such conditions shall promptly notify the Owner/Owner's Representative/General Contractor and the Engineer in writing of the specific differing conditions. Upon written notification, the Engineer and Owner/Owner's Representative/General Contractor will investigate the conditions, and determine if adjustments to the Construction Documents and/or to the
- Contract are warranted. No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice of a changed condition.

8.0 Compaction:

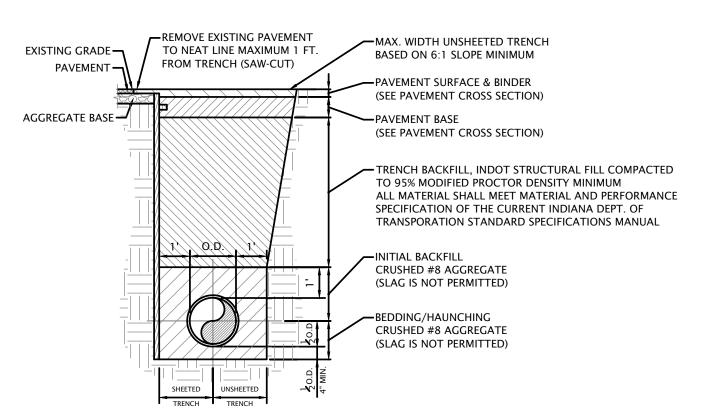
- 1. Exercise care when compacting exposed soils relative to water table, rain or other moisture conditions. 2. Maintain moisture content of embankment material and structural fill material near optimum as recommended by the
- soils testing laboratory and Soil Boring Engineer. Maintain optimum moisture content of backfill and fill material to attain the required compaction density.
- 3. Backfill common site fill, embankment fill, structural fill and utility trenches to contours and elevations defined on the project site development plans.
- 4. Systematically backfill to allow maximum time for optimum compaction and do not backfill over porous, wet or spongy subgrade surfaces.
- 5. Employ a soils placement and compaction method that does not disturb or damage work performed and that maximizes soil compaction. 6. All common site, embankment and structural fill shall be place and compacted in continuous layers/lifts not exceeding
- 8-inches loose depth. 7. Compact subsoil for structural fill to 95% of the Modified Proctor Maximum Dry Density (ASTM D1557) beneath all
- 8. Compact subsoil for structural fill to 95% of Modified Proctor Maximum Dry Density (ASTM D1557) beneath all pavement areas and utility corridor trenches.
- 9. Compact subsoil for common site fill and embankment fill to 90% of the Modified Proctor Maximum Dry Density (ASTM D1557) beneath all lawn, landscape and detention pond areas.
- 10. Compact subsoil under building pad area to achieve soil-bearing capacities of 3,000 psf at a distance of 4-feet below the proposed finish floor elevations of all building ads.
- 11. If tests indicated work does not meet specified requirements, all sub-standard work shall be immediately removed, replaced and retested at no expense to the Owner.

GENERAL NOTES

- 1. Elkhart County, DVG Team, Inc. (Engineer) and any Utility Company affected must be notified at least two working days prior to commencement of work. Prior to construction the contractor is to call
- 2. Elevation Datum is U.S.G.S.

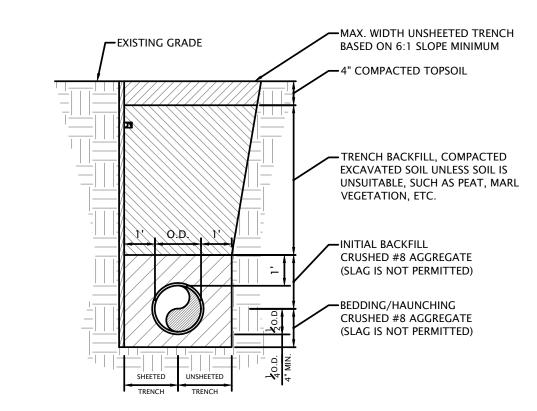
proctor density. Slag is not permitted.

- 4. The locations of existing underground utilities, such as water mains, sewer, gas lines, etc., as shown on the plans have been determined from the best available information and is given for the convenience of the contractor. However, the engineer and the owner do not assume responsibility for the accuracy of the locations shown. It shall be the responsibility of the contractor to contact all utility companies and their facilities shall be located prior to commencement of any work.
- 5. Wherever obstructions not shown on the plans are encountered during the progress of the work and interfere to such an extent that alteration in the plans is required, the engineer shall be notified prior to any changes and any changes shall only be as approved via written instruction by the Engineer and the local Municipal Engineer.
- 6. As-built drawings shall be prepared by the contractor and submitted to the engineer as soon as the project is completed. Any change in the length, location or alignment shall be shown in red. "AS BUILT" drawings shall be
- forwarded to the appropriate utility organizations. Four (4) copies shall be submitted to the Municipal Engineer. 7. All proposed sanitary sewer, storm sewer, water main and service lines under and within 2' of pavement, curbs, and sidewalk shall be backfilled with crushed limestone (INDOT #53) or material consistent with Class I or II material as described in ASTM D2321 placed in 8" maximum layers and mechanically compacted to 95% modified
- 8. Materials used for water, sanitary sewer, storm sewer and streets shall conform to the Elkhart County Highway Department and/or INDOT standards and specifications and/or New Paris Conservancy District requirements.
- 9. Any existing public improvements (sidewalks, curb and gutter, etc.), disturbed during construction shall be replaced in kind, or per current of Elkhart County Highway Department specifications as directed by the Municipal
- 10. All public street construction shall meet performance standards of the current edition of the Indiana Department of Transportation Standard Specifications.
- 11. Street signage shall be included in accordance with the MUTCD requirements applicable at the time of construction.
- 12. The Owner/General Contractor shall be responsible for any and all utility new customer form submissions. Utility company review typically cannot begin until all new customer forms have been submitted.



PIPE BEDDING/TRENCH BACKFILL (NOT TO SCALE)

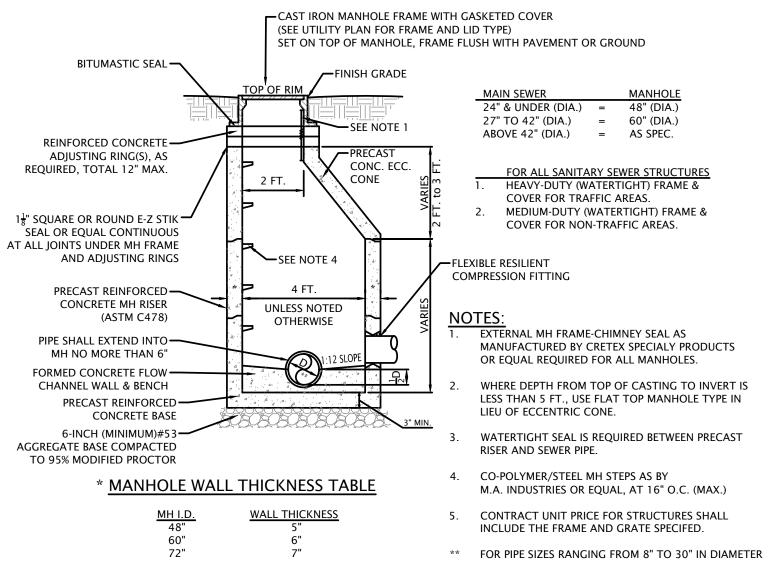
FOR TRENCH IN PAVEMENT AREAS



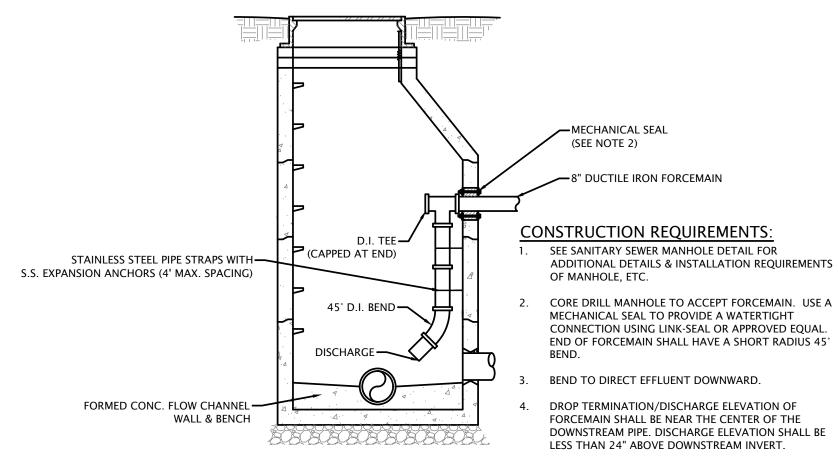
PIPE BEDDING/TRENCH BACKFILL

FOR TRENCH IN GRASS/LANDSCAPED AREAS

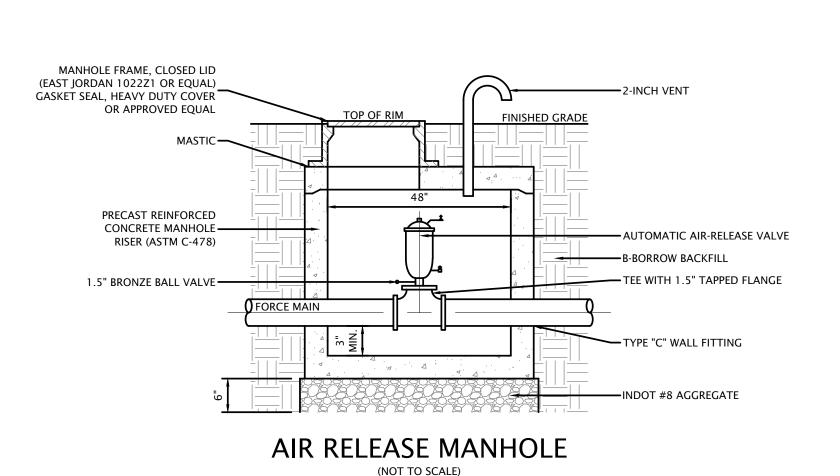
- 1. All Floor Drains shall discharge to the sanitary sewer.
- 2. Sanitary sewer pipe shall be PVC (SDR 26) ASTM D-3034 with push-on rubber gasket joints and shall be in accordance with ASTM C-3212, unless otherwise noted on the plans.
- 3. All sanitary sewer manholes shall be air tested for leaks in accordance with ASTM C1244-93 and Standard Test Method for Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test.
- 4. Where ductile iron pipe is used for sanitary sewer, the pipe shall be in accordance with ANSI A-21.51 and the joints in accordance with ANSI
- 5. A deflection test shall be performed on each flexible pipe following the elapse of thirty (30) days after the placement of the final backfill. No pipe shall exceed a deflection of five percent (5%) or greater. The diameter of the rigid ball or mandrel used for a deflection test shall be no less than ninety-five percent (95%) of the base inside diameter of the pipe to be tested dependent on what is specified in the corresponding ASTM standard. The test shall not be performed with the aid of a mechanical pulling device.
- 6. A leakage test shall be performed using one of the following leakage test types. a.) A hydrostatic test shall be performed with a minimum of two (2) feet of positive head. The rate of exfiltration or infiltration shall not exceed two hundred (200) gallons per inch of pipe diameter per linear mile per day. An air test shall conform to ASTM F1417-92, Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air, for plastic pipe.
- 7. All sanitary sewer shall be inspected by New Paris Conservancy District.



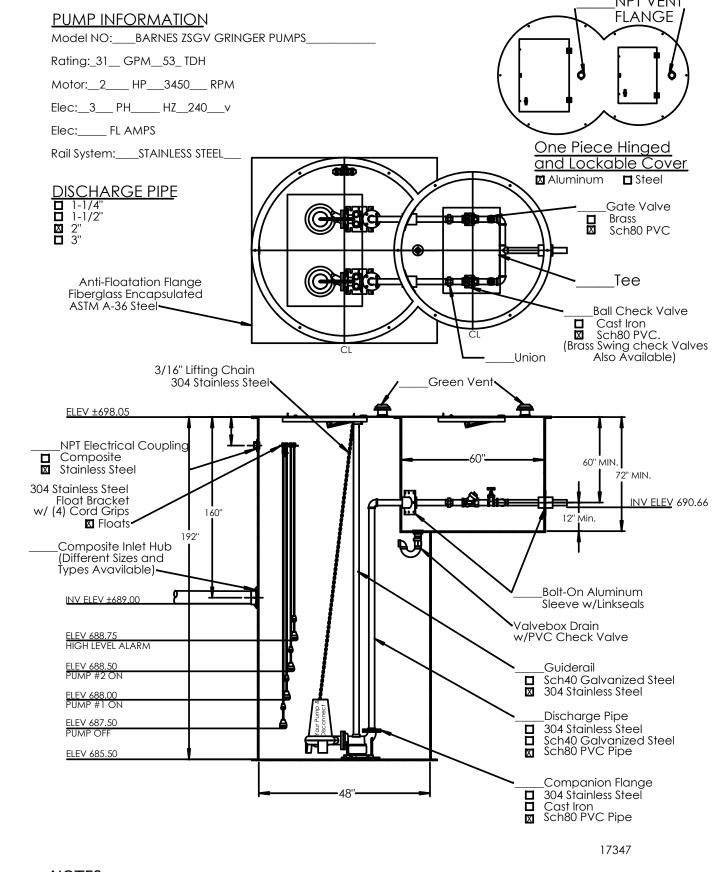
SANITARY SEWER MANHOLE



FORCEMAIN INSIDE DROP CONNECTION TO MANHOLE DETAIL



48-INCH DIAMETER PRE-CAST CONCRETE MANHOLE STRUCTURE



THIS DRAWING IS PRELIMINARY LAYOUT ONLY. NOT FOR CONSTRUCTION. CONSTRUCTION DRAWINGS WILL BE FORWARDED UPON RECEIPT OF APPROVED SUBMITTALS.

- SOME ITEMS NOT SHOWN FOR CLARITY.
- 3. ADEQUATE LIFTING POINTS TO BE PROVIDED.
- 4. CONTRACTOR TO FILL INLET HUB WITH GROUT AFTER INSTALLING FIELD PIPING.
- 5. ALL COMPRESSION COUPLINGS, EPC'S & FCA'S TO BE RESTRAINED WITH A MINIMUM OF 2 CONTROL RODS WHEN
- 6. LIFT STATION TO BE INSTALLED BY AN EXPERIENCED AND QUALIFIED CONTRACTOR.
- 7. ALL CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 8. CONTRACTOR AND OR ENGINEER TO VERIFY ALL DIMENSIONS, ELEVATIONS, PIPING LAYOUT, AN ORIENTATION OF INLET(S), DISCHARGE AND CONDUIT(S).
- 9. ELECTRICAL COMPONENTS IN THE WET WELL SHALL BE RATED FOR CLASS I, DIV. I, GROUP C & D LOCATIONS.
- 10. 2x2" CONDUIT FROM CONTROL BASIN TO PANEL.
- POINT OF ORIGIN ON PUMPS WITHOUT SPLICING. 12. WET WELL SHALL BE A PRE-MANUFACTURED FIBERGLASS UNIT BY TOPP INDUSTRIES, BARNEYS PRODUTS OR OTHER

11. CONTRACTOR TO ORDER CONTROL AND POWER CORDS OF SUFFICIENT LENGTH TO REACH CONTROL PANEL FROM

- EQAUL APPROVED BY ENGINEER OF RECORD. 13. CONTRACTOR SHALL USE GASVODA & ASSOCIATES INC FOR LIFT STATION SUPPLY & DESIGN, OR OTHER EQUAL
- 14. GASVODA CONTACT REPRESENTATIVE: Andy Beison

APPROVED BY ENGINEER OF RECORD.

708-878-4607 abeison@gasvoda.com

HEAVY DUTY ADJUSTABLE CLEANOUT

(JAY R. SMITH #4239) OR APPROVED EQUAL

6" SERVICE "WYE" IN

FLOW —

SANITARY CLEANOUT

(NOT TO SCALE)

CLEANOUT REQURED 2' TO 5' FROM BUILDING AND AT

100' INTERVALS ALONG SEWER SERVICE, AS MEASURED

FROM SEWER MAIN

PVC SANITARY -

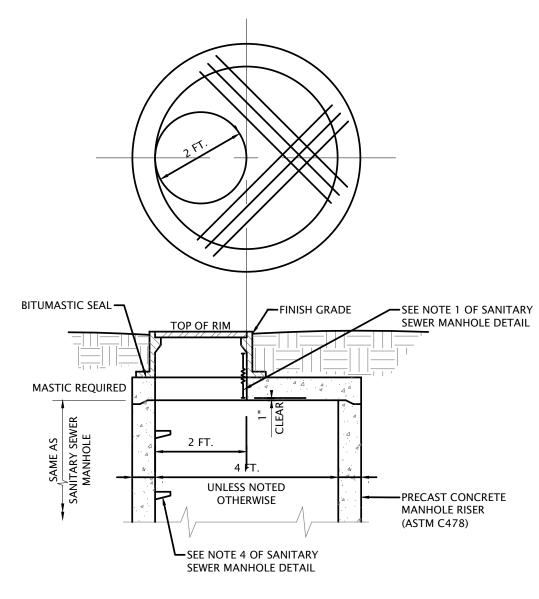
SEWER LATERAL

SEWER SERVICE LINE

D

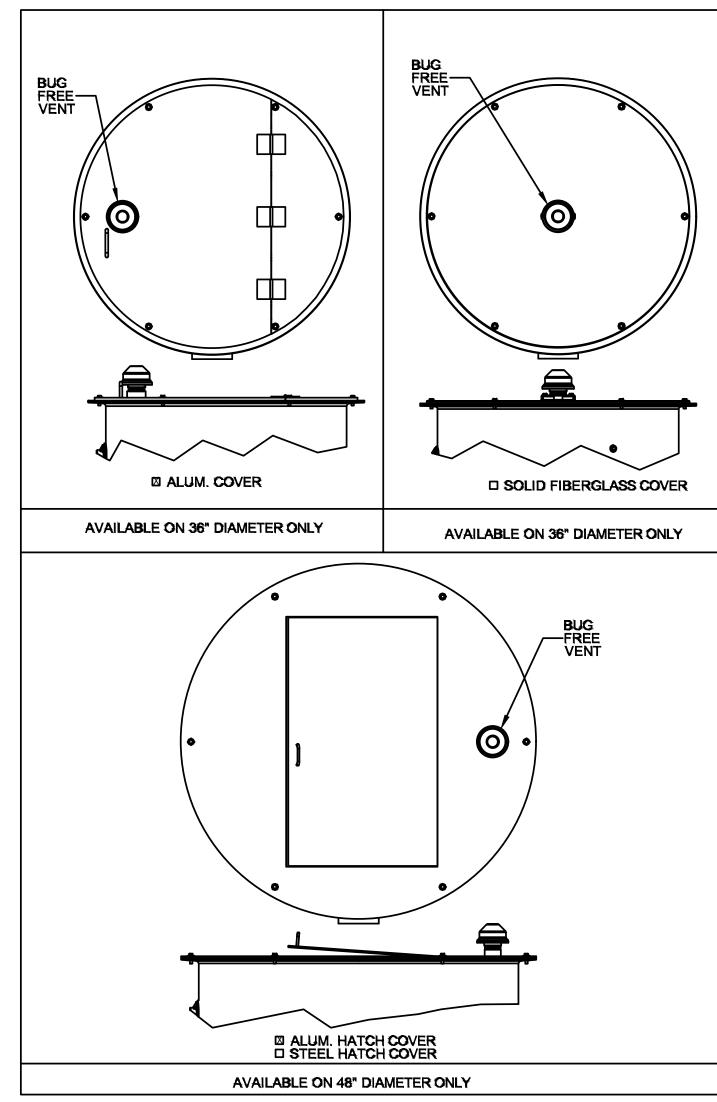
- 15. CONTRACTOR SHALL PROVIDE MEANS FOR PORTABLE GENERATOR HOOKUP.
- 16. PROVIDE LOCKS ON LIFT STATION HATCHES AND CONTROL PANEL. FURNISH 3 SETS OF KEYS TO OWNER.

LIFT STATION DETAIL (1)

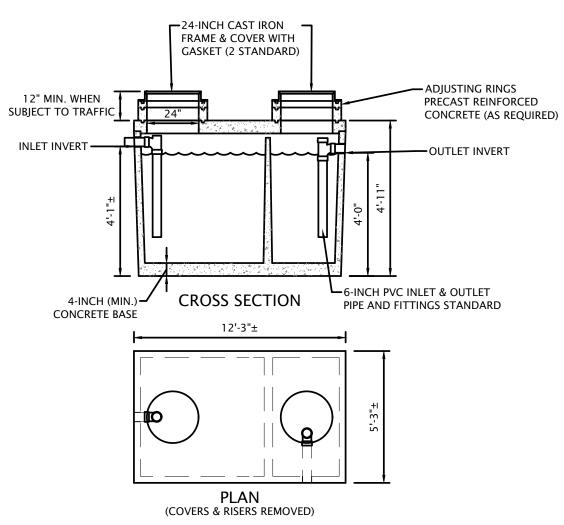


MANHOLE TOP (FLAT TOP)

USED WHERE RESTRICTED HEAD ROOM WILL NOT ALLOW FOR TAPERED WALLS SEE SANITARY MANHOLE NOTES



BASIN COVER OPTIONS LIFT STATION DETAIL (2)



GREASE INTERCEPTOR (1,500 GALLON)

NOTES:

1. LIQUID CAPACITY IS 1,500 GALLONS.

ADMINISTRATIVE CODE.

- 2. TANK DESIGNED FOR NON-TRAFFIC. 3. SUITABLE NATIVE OR SUB-BASE SHALL BE PREPARED TO HANDLE ANTICIPATED LOADS. 4. EXCAVATION SHALL BE BEDDED WITH SUITABLE GRANULAR MATERIAL AND SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY OR TO REQUIREMENTS OF THE
- PROJECT GEOTECHNICAL ENGINEER. 5. MINIMUM EXCAVATION SIZE: 13'-3" x 6'-3" x DEPTH REQUIRED. 6. PROVIDE FLEXIBLE RESILIENT COMPRESSION FITTINGS BY A-LOK PRODUCTS INC (OR APPROVED EQUAL) AT INLET & OUTLET PIPE.

7. GREASE INTERCEPTOR SHALL MEET THE REQUIREMENTS OF ARTICLE 6 - SANITARY ENGINEERING, SECTION 410 IAC 6-10.1-66 GREASE TRAPS IN THE INDIANA

	`)	<u> </u>)	
DETAILS					

WATERMAIN GENERAL NOTES

1. For PVC C900 pipe installation: DR14 pipe is required. Deflection of pipe joints and bending of pipes are not permitted. All angles shall be made with proper fittings. When restraint of pipe-to-pipe joints are required, all joints shall be restrained with external split serrated restraint harnesses. Select fill material required for bedding

and embedment regardless of pipe's proximity to pavement. Select fill material required for beddign and embedment regardless of pipe's proximity to pavement. See Restrained Pipe Length table. 2. For Ductile Iron pipe installation: Thickness Class 52 for pipes 12-inch nominal size and smaller. When restraint of pipe-to-pipe joints are required, push-on restraining gaskets with integral stainless steel locking segments are permitted on pipe-to-pipe connections 12-inch nominal size and smaller only. Pipe-to-pipe connections greater

than 12-inch nominal size shall be restrained per specification section 15105. 3. For HDPE pipe installation: DIPS DR11 for sizes 4 inch and larger, IPS DR9 for 3 inch, and CTS DR9 for sizes smaller then 3 inch. HDPE Bends, tees and crosses are not acceptable. Pressure testing of HDPE pipe differs from ductile iron and PVC pipe. Pipe fusion must be completed by certified technician: certififcation to be submitted prior to construction

All fire hydrant laterals shall be ductile iron pipe. All MJ T-bolts and flange bolts shall have Xylan or FluoroKote #1 corrosion resistant coating.

All fittings shall be restrained using MJ retainer glands. 7. Thrust restraint to be achieved through the restraint of pipe joints and fittings. Thrust blocks are not an acceptable means of thrust restraint, except when required in connecting to existing water main and for installation of fire hydrants. See specifications sections 15105 and 15120 for pipe joint restraint requirements for ductile iron and

8. Copper-clad steel tracer wire required on installation of all pipe. Tracer wire shall be taped to pipe or polyethylene encasement at a minimum spacing of 10-feet. Splices shall be encased in waterproof connectors. Continuity shall

be tested after completion of backfill. 9. Select fill material required for final backfill when within 5-feet of pavement.

10. Maintain minimum cover depth of 60" and a maximum of 84". 11. Water mains shall be laid at least 10' horizontally from any existing or proposed sanitary sewer, storm sewer, sewer manhole, drain or service connection as measured from outside edge of the water main to outside edge of the sewers or manhole. If local conditions prevent horizontal separation of 10 feet, then the SEWER SHALL BE CONSTRUCTED OF WATER MAIN QUALITY REQUIREMENTS as specified in the IAC 8-3.2 Sections 8, 9 and 17(a).

12. When water mains cross any existing or proposed sanitary or storm sewers (sewers), there shall be at least 18 inches vertical separation between the outside edge of the water main and the outside edge of the sewer. This shall be the case where water mains cross above or below sewers. This crossing must be at a minimum angle of forty-five (45) degrees measured from the centerline of each. All these conditions specified shall be maintained for a minimum distance of ten (10) feet from either side of the water main. If vertical separation specified herein cannot be met, then the SEWER SHALL BE CONSTRUCTED OF WATER MAIN QUALITY REQUIREMENTS as specified in

the IAC 8-3.2 Sections 8, 9 and 17(a). 13. For additional separation requirements between water mains and sewers, the Contractor shall refer to the

Indiana Administrative Code 327 IAC 8 and IAC 3. 14. All water main shall be installed in accordance with IAC 8-3.2-17. The contractor shall provide pressure and leak

testing results conforming to IAC 8-3.2-17(a). 15. All water main shall be disinfected in accordance with IAC 8-3.2-18. RESTRAINED PIPE LENGTH

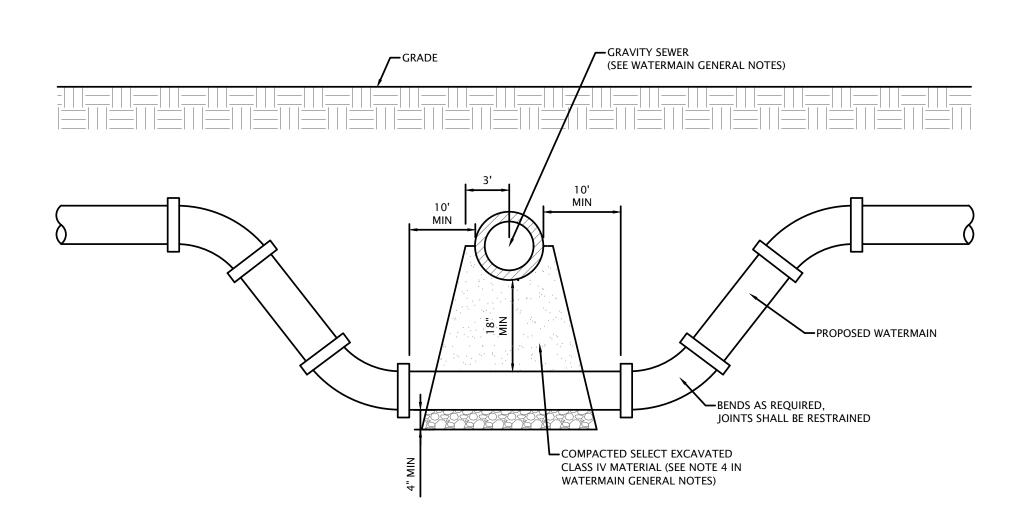
PIPE SIZE (INCHES)	TEE* BRANCH	90° ELBOW	45° ELBOW	22 1/2° ELBOW	11 1/4° ELBOW	DEAD ENDS
4	0	15	6	3	2	20
6	9	22	9	4	2	28
8	18	27	11	5	3	37
10	25	33	14	7	3	44
12	33	39	16	8	4	52
14	41	44	18	9	4	60
16	48	50	21	10	5	68
18	56	55	23	11	5	75
20	63	61	25	12	6	82
24	77	71	29	14	7	96
30	97	86	36	17	8	116
36	116	100	41	20	10	135

* ONE FULL LENGTH (18') OF PIPE ON BOTH SIDES OF BRANCH TO BE

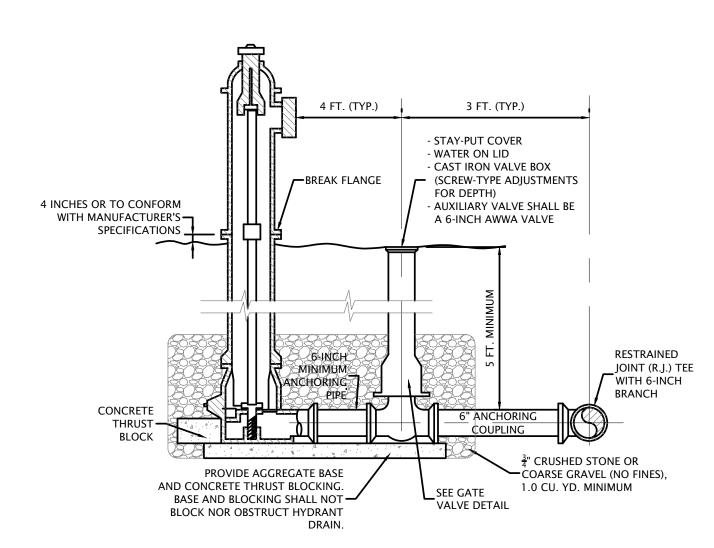
INCREASE ALL LENGTHS IN TABLE BY 75% FOR USE ON POLYETHYLENE WRAPPED DUCTILE IRON PIPE OR PVC PIPE.

TEST PRESSURE BASED ON 150 PSI.

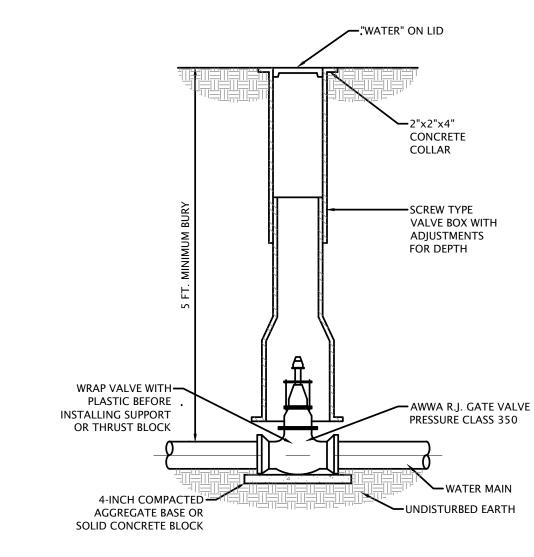
RESTRAINED PIPE LENGTH TABLE



SANITARY/STORM SEWER & WATERMAIN CROSSING

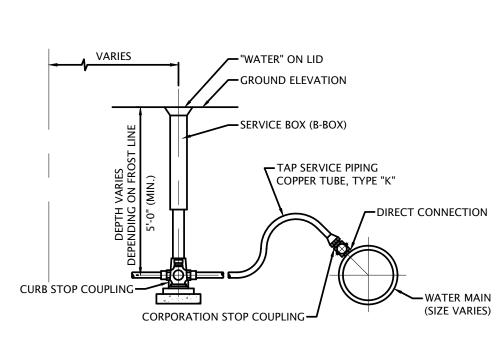


FIRE HYDRANT ASSEMBLY (TYPE "A") (NOT TO SCALE)

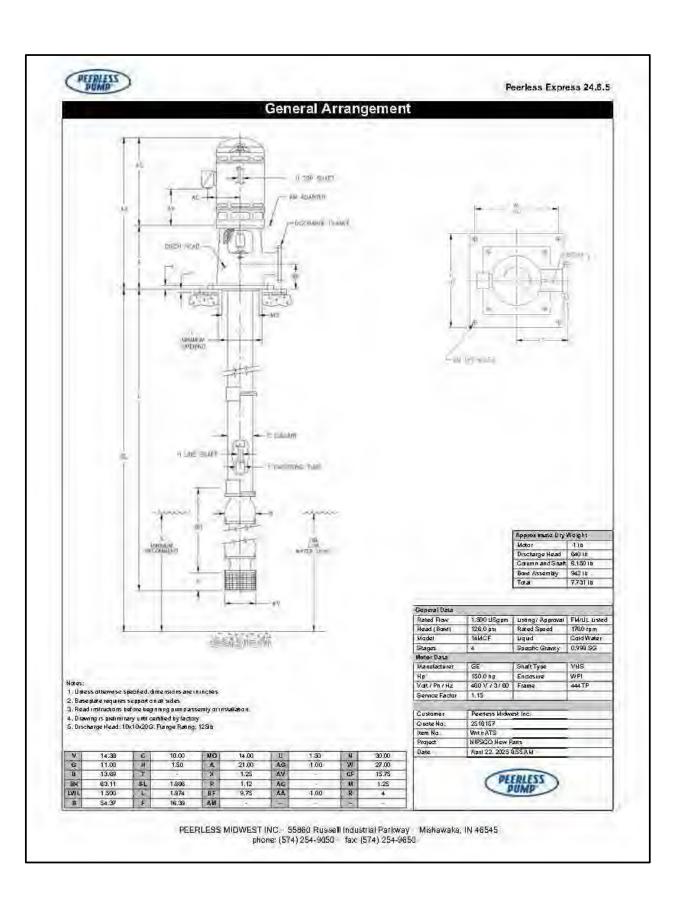


GATE VALVE & BOX (12-INCH OR SMALLER) (NOT TO SCALE)

USE IF DUCTILE IRON IS USED FOR WATER SERVICE

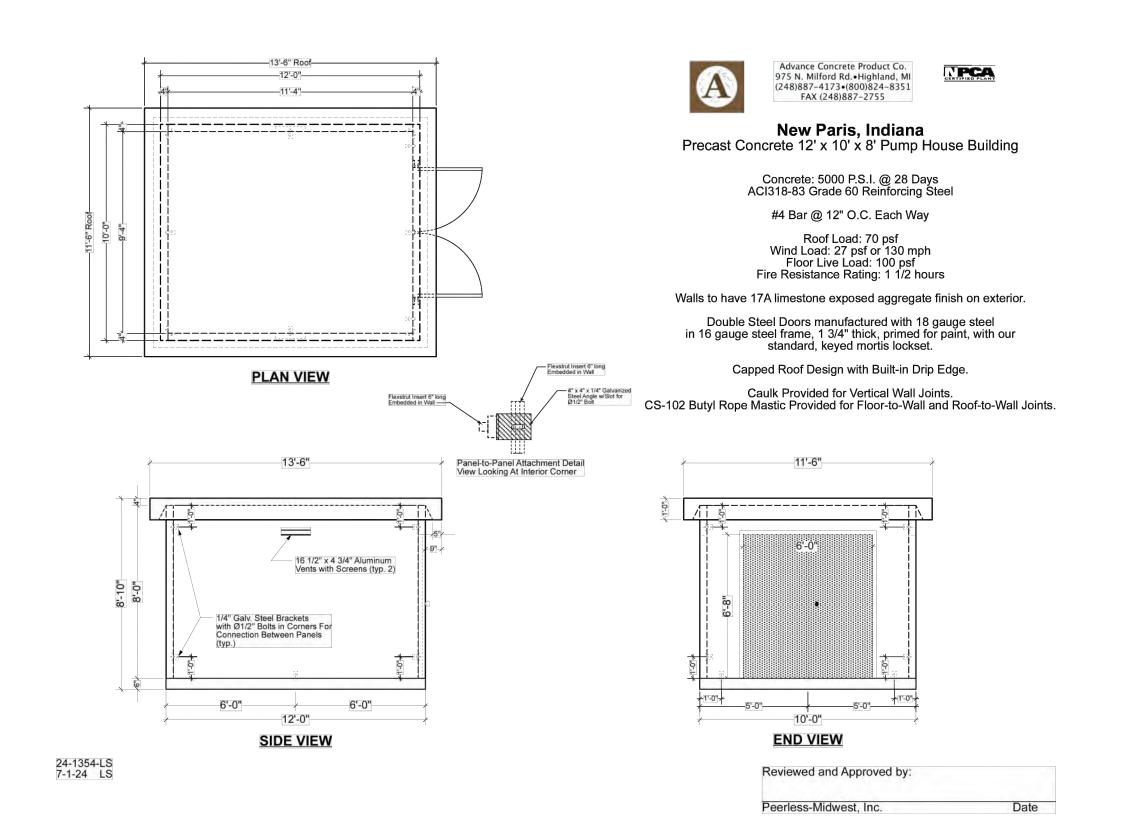


TYPICAL B-BOX & TAP SERVICE PIPING



FIRE PUMP DETAIL (NOT TO SCALE)

Autodesk Revit 2023



PUMP HOUSE DETAIL (NOT TO SCALE)

D

STORM SEWER GENERAL NOTES

- 1. Footing drains, sump pump drains and outside drains shall discharge to the storm sewer where storm sewer is provided.
- 2. The maximum allowable rate of infiltration or exfiltration shall not exceed 100 gallons, per 24 hours per inch-diameter per mile of sewer pipe.
- 3. Storm sewers shall be as noted on the plans. If approved by the Engineer, an alternative storm sewer pipe 12 inches and larger can be reinforced concrete minimum Class III, wall B conforming to ASTM C-76; Corrugated High-Density Polyethylene Pipe with smooth interior (ADS N-12) conforming to AASHTO M-294; Corrugated Polypropylene Pipe with smooth interior conforming to AASHTO M-330 (ADS HP STORM); Corrugated High-Density Polyethylene Pipe with smooth interior (PRINSCO, GOLDFLO) conforming to AASHTO M-294 or other INDOT, Type 2 storm sewers as approved by the Engineer.
- 4. All HDPE storm sewer pipe shall be tested with a mandrel. Maximum deflection shall meet ASTM C1244-93 and Standard Test Method for Concrete Sewer Manholes 30 days after backfill, and should be performed without the aid of a mechanical pulling device. The deflection testing shall meet all requirements of IDEM section 327 IAC 3-6-19(a) (b) (c).

ELKHART COUNTY ROADS

GUIDELINES AND STANDARDS

FOR

DESIGN AND PUBLIC IMPROVEMENT

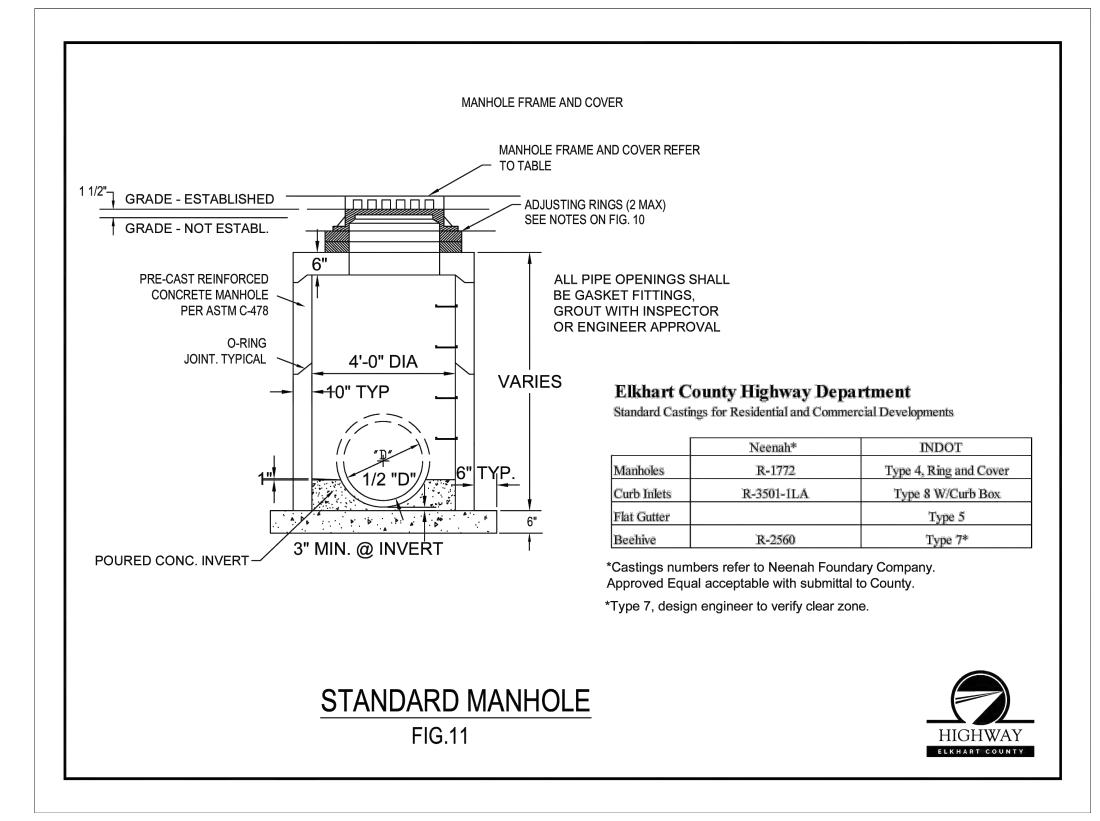
"STREET STANDARDS"

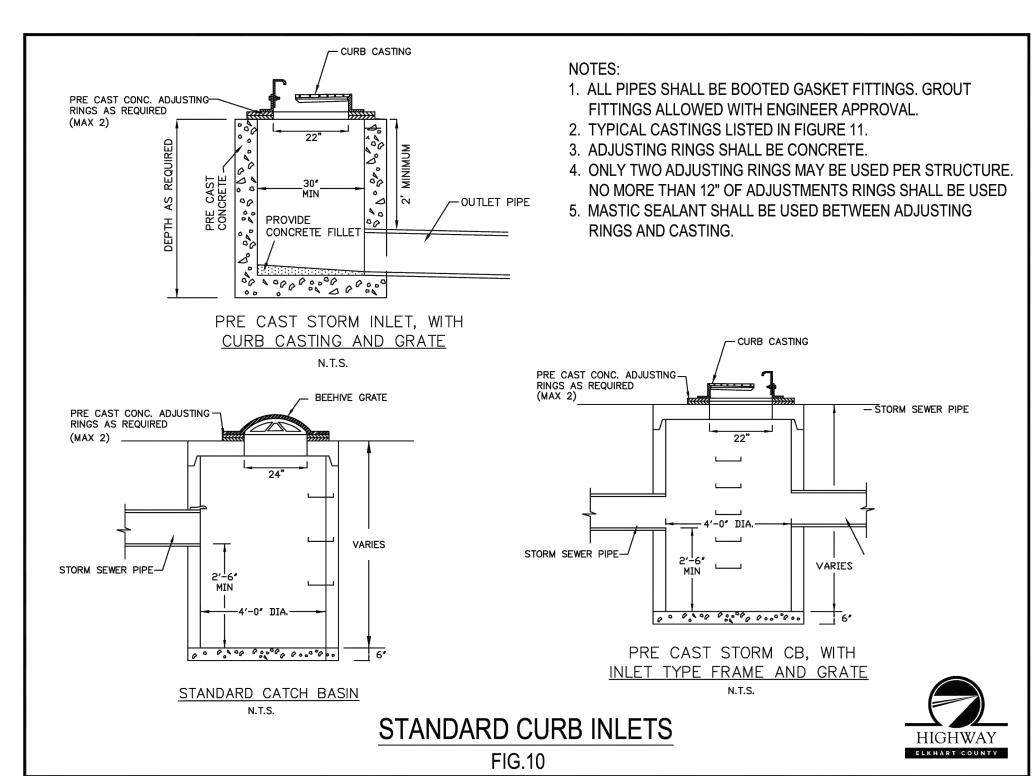
July 8, 2024

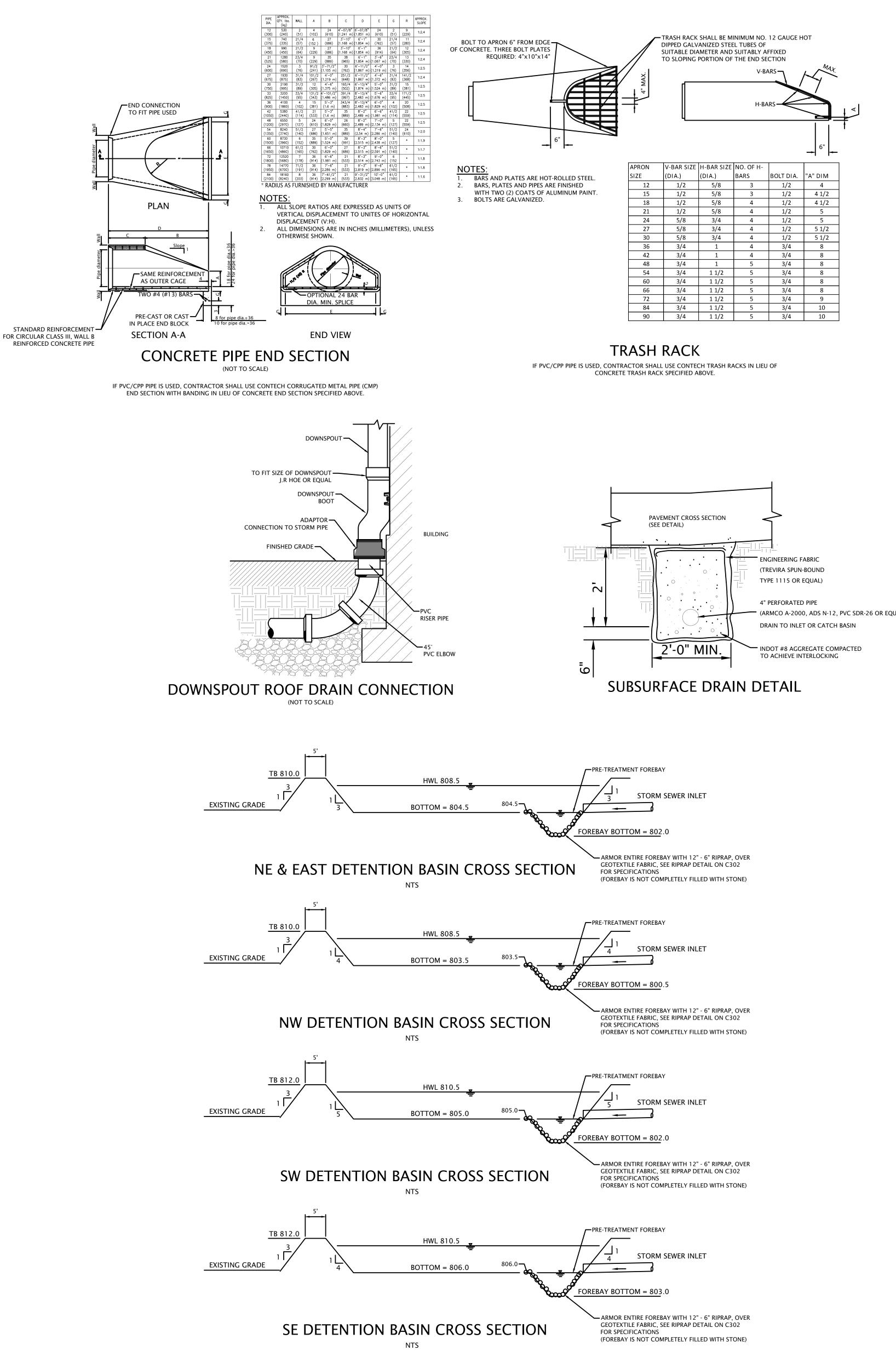
HIGHWAY ELKHART COUNTY

ELKHART COUNTY HIGHWAY DEPARTMENT 610 Steury Ave Goshen, IN 46528 574-534-9394

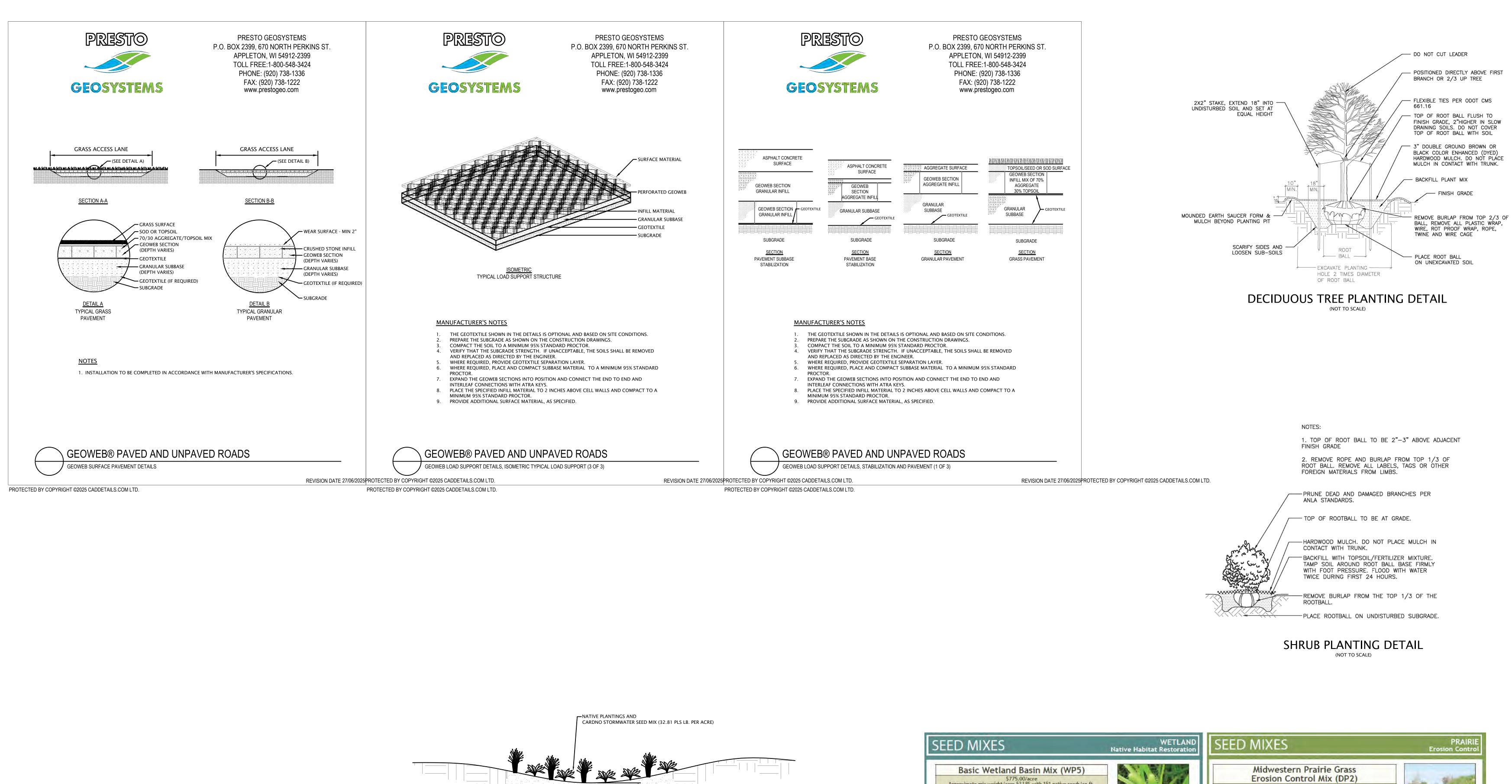
THE ELKHART COUNTY HIGHWAY DEPARMENT STREET STANDARDS SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS

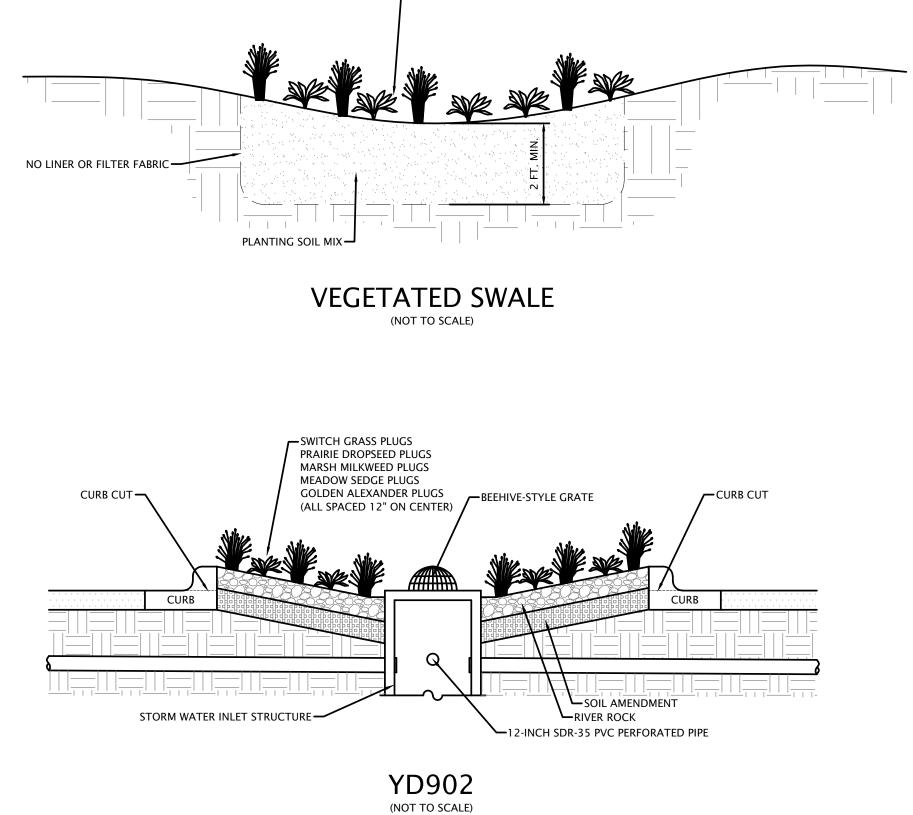






NISOURCE - I NEW PARIS, I





NOTES:

1. SOIL AMENDMENT SHALL CONSIST OF 50% SAND, 25% TOPSOIL, AND 25%

D



DETENTION BASIN SEED MIXES (NOT TO SCALE)

NISOURCE -NEW PARIS,

C205

Autodesk Revit 2023

3" MULCH, DO -

CONTACT WITH

EDGE ABOVE

FINISH GRADE

FINISHED GRADE

XYXIVXXIXXXIXXXIVXXXIXXXIXXXXI

FOR POTTED GRASS OR PERENNIALS, REMOVE

GENTLY LOOSEN SOIL AND ROOTS AT THE

POTS COMPLETELY AND

BOTTOM OF THE PLANT

SLIGHTLY TAPER —

- REMOVE AND PRUNE

- PLACE BASE OF PLANT AT

- SCARIFY BOTTOM OF PIT

FINISHED GRADE OF BED

DAMAGED LEAVES

— PLANTING MIXTURE

SUBGRADE

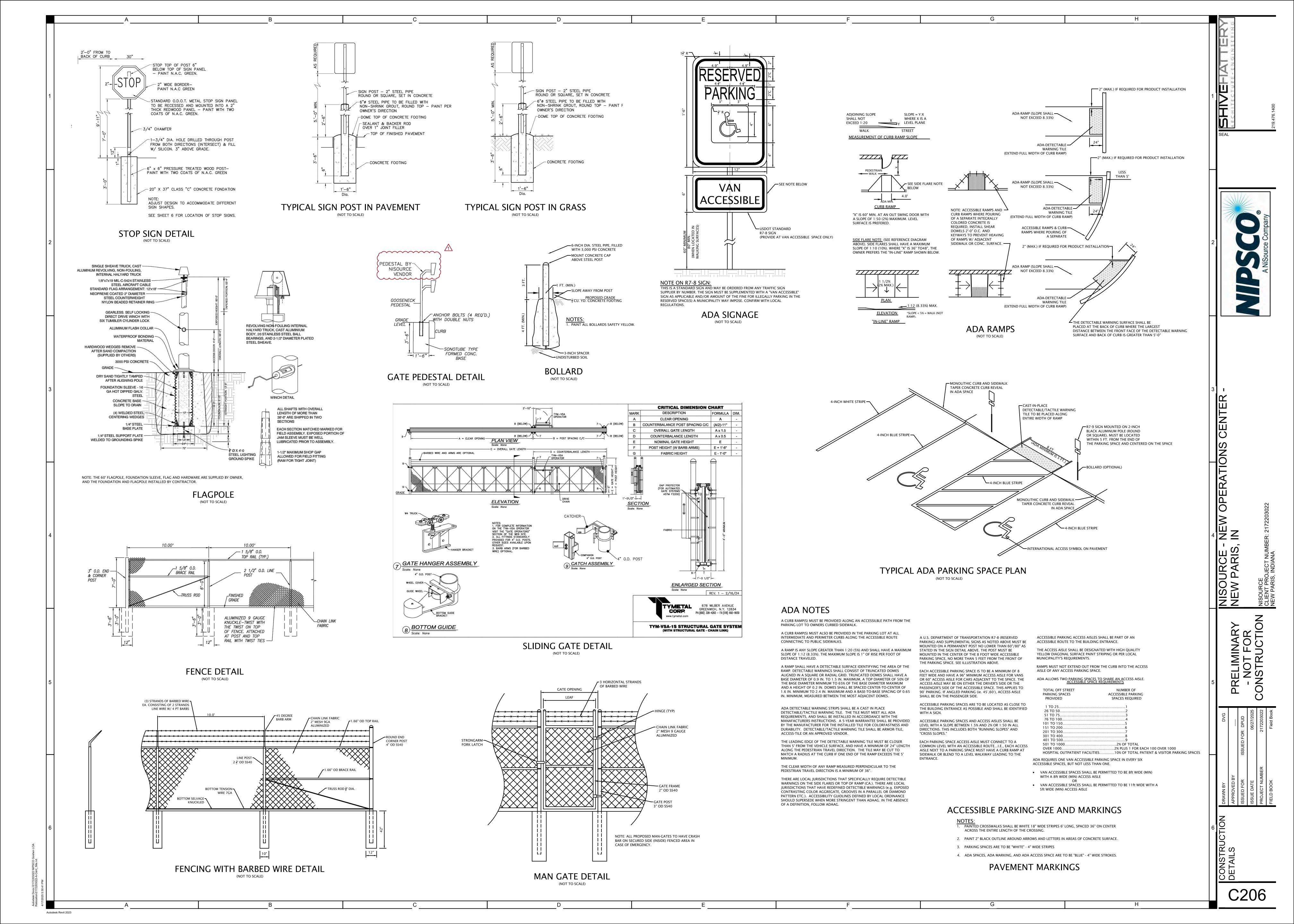
GRASS AND PERENNIAL

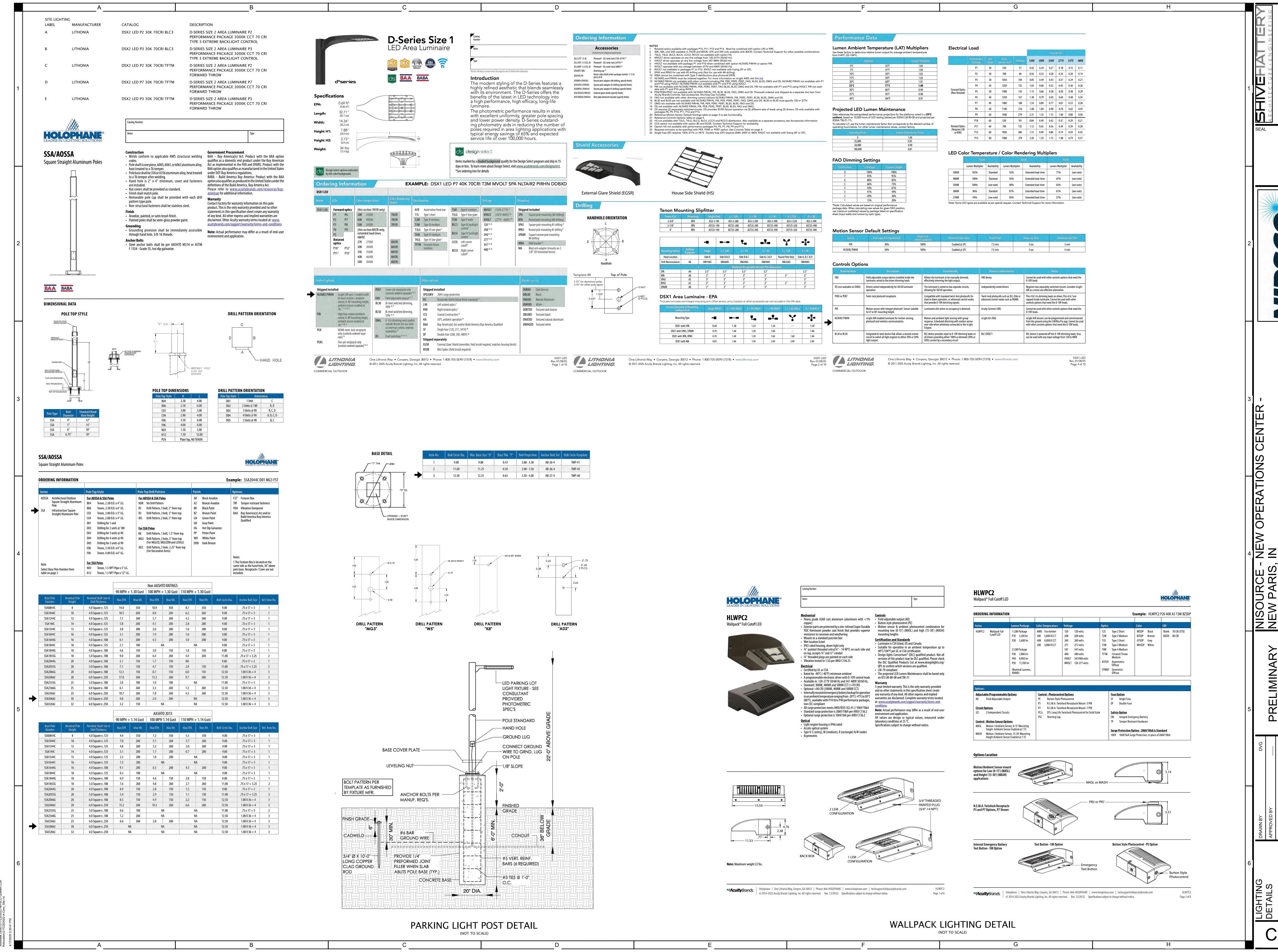
PLANTING DETAIL (NOT TO SCALE)

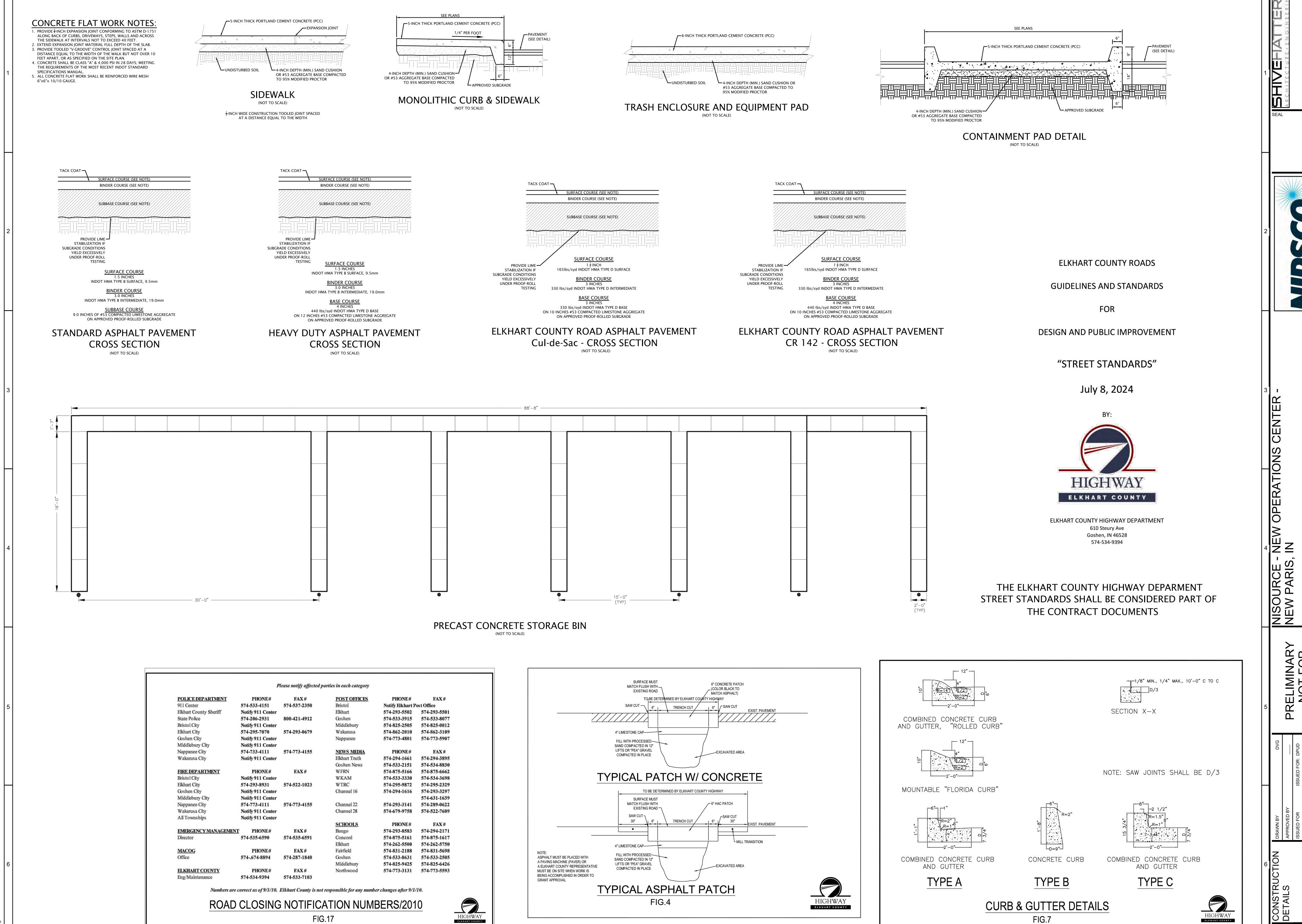
NOT PLACE

MULCH IN

TRUNK







D

C208

Erosion control shall be in accordance with Elkhart Storm Water Ordinance & Storm Water Technical Manual & "The Indiana Storm Water Quality Manual".

There are two main elements for Storm Water Quality: Construction Site Stormwater Runoff Control and Post-Construction Stormwater Management. The contractor shall provide Construction Site Stormwater Runoff Control as required and construct the Post-Construction Stormwater Management features as shown on these plans.

The contractor shall be responsible for maintaining site conditions such that Stormwater Runoff Control is provided throughout construction. Surface water runoff management, ie: temporary ditches, swales, bypass pumping, and erosion control measures shall be constructed and maintained as required by construction activity and these items are considered incidental to the contract. These items shall be included in the base contract.

Upon the completion of the site work the contractor shall remove the Construction Site Stormwater Runoff Control measures and install the Post-Construction Stormwater Management measures.

Those Stormwater Runoff Control measures such as detention ponds that will also serve in the Post-Construction Stormwater Management Plan shall have construction sediment removed and full functionality restored upon the completion of the Site construction.

Each Construction Site Stormwater Runoff Control measure shall be installed immediately following the construction of the structure or feature in which the measure is intended to protect.

The contractor is responsibile for any damage and/or cleaning to the structure or feature. Corrective work incurred by the contractor shall be considered incidental to the contract.

The contractor is responsibile for compliance with the S.W.P.P.P. Any fines or punative measures incurred by the project due to failure to comply with the S.W.P.P.P. are the responsibility of the contractor. These costs shall be considered incidental to the contract, and shall not be considered an extra.

During the course of construction the S.W.P.P.P. may require additional erosion control measures to be installed to address site specific items not anticipated by this plan due to construction schedule or sequencing. It is not the intent of this plan to direct the schedule or sequencing beyond the general construction sequence. Any stormwater runoff control measures required due to construction methodology, sequencing, etc. are incidental to the contract. Corrective work and maintenance shall also be considered incidental, and shall not be considered an extra.

All items shown on these detail sheets are standard details and describe standard installation practices. Not all of these Stormwater Runoff Control measures will be utilized. See the erosion control plan for location and types of erosion control measures utilized. The stormwater checklist document will serve to further outline the S.W.P.P.P. for this project and it is considered part of the plan documents. In the event that site conditions require additional or different erosion control measures, these details serve to describe some acceptable methods.

POTENTIAL CONSTRUCTION POLLUTANT SOURCES

Potential pollutants that could enter the stormwater during construction include exposed soils, fuel and oil from leaking heavy equipment and vehicles. Equipment has the potential to leak fuel throughout the disturbed areas, or wherever construction is occurring. The contractors will inspect equipment before initiating construction and routinely thereafter. If leaks are discovered, they will be repaired before the equipment is used or new equipment will be brought to the site.

Bulk Fuel storage on-site can leak and thereby be a pollutant. All Fuel storage tanks shall meet the minimum requirements of the Fuel Storage requirements.

Exposed soils also have potential for being eroded by water and wind and must be prevented from entering the stormwater system. The contractor will install silt fence, riprap, and ditch checks in areas designated on the site development plans.

MATERIAL HANDLING AND STORAGE

- Concrete wastewater liquid shall be fully evaporated prior to the planned capacity of the washout structure capacity being
- exceeded. Liquid must be disposed of offsite as wastewater. • Concrete wastewater liquid that has not solidified may be pumped out into a secondary lined container or into a tanker and
- taken to an approved disposal facility. • Concrete wastewater shall not be allowed to leak onto the ground, run into storm drains, or into any body of water. Where
- washout wastewater leaks onto the ground, all contaminated soils shall be excavated and disposed of properly. • Allow concrete wastes to set. Break up and properly dispose of hardened wastes. Upon removal of waste, inspect the structure.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose of in the trash.
- Do not dump excess concrete onsite, except in designated areas.
- When concrete washout areas are no longer required, close the concrete washout systems. Dispose of all hardened concrete and other materials used to construct the system. Backfill, grade, and stabilize any holes, depressions, and other land disturbances associated with the system.

SOLID WASTE MANAGEMENT Select designated waste collection areas onsite.

- Inspect dumpsters for leaks and repair any dumpster that is not watertight. • Dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project. Provide
- containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is
- Full dumpsters should be removed from the project site and the contents should be disposed of by the trash hauling contractor. • Plan for additional containers and more frequent pickup during the demolition phase of construction.
- Collect site trash daily, especially during rainy and windy conditions. • Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing
- compounds) are not disposed of in dumpsters designated for construction debris. • Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor.
- Arrange for regular waste collection before containers overflow. Clean up immediately if a container does spill. Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.
- Litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly, regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and
- debris should not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.
- Construction debris and waste should be removed from the site biweekly or more frequently as needed.
- Construction material visible to the public should be stored or stacked in an orderly manner. • Stormwater run-on should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary
- diversion structures or through the use of measure to elevate waste from site surfaces. • Solid waste storage areas should be located at least 50 ft. from drainage facilities and watercourses and should not be located

Inspect construction waste area weekly

in area prone to flooding or ponding.

- CHEMICALS AND LIQUIDS STORAGE AND HANDLING Store materials in manufacturer's containers.
- Maintain Safety Data Sheets (SDS) on all products. • Store materials in a weatherproof/vandal resistant locker or building. Keep materials away from flammable sources.
- Follow manufacturer's instructions for the proper use and storage of all materials. • Do not perform washing of applicators or containers of solvent, paint, grout, stucco, or other materials near or into a waterway
- or stormwater inlet. Wash water is to be disposed offsite as wastewater. Tightly seal and store paint containers and curing compounds when not required for use. • Do not discharge excess paint to a waterway or storm system. Properly dispose of excess paint according to the manufacturer's
- instructions and in accordance with all Federal, State, and local regulations. Provide secondary containment for aboveground storage tanks or storage areas containing hazardous materials that are located
- Remove collected liquid in the secondary containment area within 72 hours of its discovery to maintain the capacity.
- Apply fertilizers only in the minimum amounts recommended by the manufacturer, as indicated from a soil test, or per the
- Indiana Stormwater Quality Manual.
- Work fertilizers into the soil to limit exposure to stormwater. Do not apply immediately prior to precipitation events.
- Store fertilizers in a covered area and transfer partially used bags to a sealable container to avoid spills.

Equipment and Vehicle Washing

- As feasible, perform washing offsite in a covered facility with an impervious floor and drains connected to the sanitary sewer. • Use a dedicated site for washing. Locate wash areas at least 50 feet from stormwater inlets or water bodies.
- Do not discharge wash water if using soaps, solvents, or detergents. Only non-contaminated wash water may be discharged to
- Inspect equipment and vehicles for leaks or worn hoses prior to washing. Properly dispose of contaminated wash water.

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL SUMMARY OF BASIC PRINCIPLES

- 1. Keep disturbed area as small as possible.
- 2. Stabilize and/or protect disturbed areas as soon as possible.
- 3. Keep storm water runoff velocities low.
- 4. Retain sediment within immediate construction area.
- The purpose of this plan is to specify methods for construction site stormwater runoff control.
- All soil erosion and sedimentation control devices shall be regularly maintained by the contractor through the duration of the project. Collected silt and sedimentation shall be removed as required to maintain the effectiveness of the silt traps or sedimentation control devices. The contractor shall replace filter materials which have become ineffective due to contamination or physical deterioration. The contractor shall inspect all stormwater runoff control devices weekly and after all storm events.

The contractor shall have a log of maintenance and inspections, to be available at the site upon request of Local and State

If possible no grubbing should take place within 30' of an active watercourse.

GENERAL CONSTRUCTION SEQUENCE

- Installation/implementation of storm water quality measures.
- Site Clearing/demolition activities.
- Topsoil removal and stockpiling.
- Mass grading.
- Installation of underground utilities.
- Construction of dry-bottom storm water pond.
- · Installation of curb and sidewalk.
- Construction of asphalt.

Final grading.

Permanent seeding/sod.

STORMWATER QUALITY CONSTRUCTION SEQUENCE

- The sequence of when each measure will be implemented is summarized below.
- Post signed CSGP NOI. NPDES Permit number. CSGP NOS (when available), contact information for the site, municipal stormwater permit, and location where construction plans may be obtained in a visible location at entrance to site.
- Construct gravel construction entrance from the street to the building pad prior to construction.
- Install silt fence/fiber rolls prior to construction at construction limits.
- Construct refueling area and concrete washout area prior to construction.
- Install inlet protection at all inlets on property. • Perform topsoil removal and stockpiling. Soil stockpiles created on site to be protected from erosion with silt fence
- Perform mass grading of the site subgrade.
- Construct dry-bottom storm water ponds to help provide the required storage needed to capture and treat storm water
- Establish permanent seeding on banks of pond to prevent the banks from degrading.
- Construct diversion swales where required/shown to divert large amounts of runoff area to the storm water pond until the storm sewer system is installed.
- Install underground utilities.
- Construct Buildings
- Upon completion of the rough grading, all areas affected by construction shall be temporarily seeded if they will remain dormant for greater than 7 days. These areas shall be stabilized within 14 days of remaining dormant and erosion control blankets shall be installed on slide slopes as shown on the plans.
- Re-seed any areas disturbed by construction and utilities installation with temporary seed mix within 3 days of completion of disturbance.
- Grade site to final elevations.
- Install curb and sidewalk.
- Construct asphalt.
- Install permanent seeding or sod.
- Maintain temporary erosion control features until construction is complete.
- Remove temporary erosion control measures once permanent vegetative cover has been established.
- Submit the the Notice of Termination for the Construction Stormwater General (CSGP) permit.
- See attached details for acceptable erosion and sedimentation control installation methods

TYPES OF CONTROL DEVICES

The Construction Site Stormwater Runoff Control Plan involves the use of four types of control devices to manage runoff thereby assuring that runoff meets the current requirements for stormwater quality.

- Erosion Control a. Chemical Stabilization b. Geotextiles c. Scour Stop d. Riprap e. Mulching
- f. Soil Roughening g. Topsoil Utilization h. Seeding i. Sodding
- 2. Runoff Control a. Check Dams b. Temporary Diversion Dikes
- c. GeoRidge Ditch Berms 3. Sediment Control a. Polymer Systems (Floc Logs) b. Fiber Rolls
- c. Sediment Basins d. Dewatering Bags e. Silt Fence f. Storm Drain Inlet Protection g. Construction Entrances
- h. Construction Entrance Mud Mats 4. Material Management (housekeeping) a. Concrete Washouts b. Spill Prevention and Control Plan
- c. Fuel Storage d. Stockpiles e. Temporary Facilities f. Material Handling and Storage

SELF MONITORING PROGRAM

process for all Construction Site Stormwater Runoff Control measures.

The contractor shall perform inspections weekly and after each storm event of 0.5" or more throughout the construction

See the Maintenance Section under each measure, or follow the manufacturers recommendations for routine

The attached self monitoring form shall be used to monitor the Construction Site Stormwater Runoff Control measures. A binder of the weekly forms shall be kept and available upon request. The contractors will inspect equipment before initiating construction and routinely thereafter to assure that mechanical

SELF MONITORING FORM

equipment is not polluting the stormwater runoff.

Type of Inspection: Scheduled Weekly Rain Event

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

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

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

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

POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

- After construction is completed, including buildings, parking lots constructed, and landscaping, the property owner will take possession of the property. The responsibility for maintaining the permanent erosion and sediment control measures belongs to the current owner/s of the property. Pollutants associated with the proposed land use will most likely be very typical of commercial developments. Most expected pollutants will be associated with automobiles and vehicles: oil, grease, antifreeze, brake dust, rubber fragments, gasoline, diesel fuel, metals, and improper disposal of trash. It is the responsibility of the property owner/s or owners association to provide routine maintenance. Some maintenance items may include trimming vegetation, picking up litter, monitoring and cleaning catch basins, pond outlet structure and culverts. The sediment control basins protecting the stormwater quality of the site will require periodic cleaning of sediments that accumulate. After vegetation has been established, temporary erosion and sediment control measures such as silt fence and straw bales will be removed by the installing contractor.
- The post-construction stormwater quality measures will be installed as a part of the normal construction activities for the site. They shall be fully operational, and complete at the completion of construction.
- Inflitration Detention Ponds
- Sediment Basins within the detention ponds.
- Green spaces The green space areas of the site should receive routine fertilizing, watering, mowing and trimming to maintain a healthy landscape.
- Catch basins Catch basins should be routinely inspected for build up of sediment. Mechanical cleaners or hand cleaning will be required to maintain the function of the catch basin.
- Storm drain flushing In the event that the storm drains cease to function properly due to excessive sediment buildup, flushing of the storm drains may be required.
- Trees
- Native re-vegetation
- Grass swales Grass swales should receive routine fertilizing, watering, mowing and trimming to maintain a healthy landscape.

DVG Team Inc. has prepared this erosion and sedimentation control plan for the owner/developer in accordance with the known requirements and ordinances. It is the responsibility of the owner/developer for compliance with this erosion and sedimentation control plan and the related attachments by all subcontractors and consultants that perform work on the project site. The owner/developer is responsible for the routine inspection and maintenance of the erosion and sediment control measures. DVG Team Inc. is not responsible for the enforcement or compliance of the Erosion and Sediment Control Plan. Any additional erosion or sediment control measures beyond those specified in this plan, for unforeseen or unexpected situations, which may be required by the regulatory agencies shall be the responsibility of the owner/developer to implement.

EROSION CONTROL MEASURES CHEMICAL STABILIZATION

MATERIAL: SOFT PIABLE MATTING SUCH AS JUTE, COIR OR BURLAP, APPLIED POLYMER SYSTEMS, "SILT STOP" DRY POWER (OR APPROVED "SILT STOP" DRY POWDER IS A SOIL-SPECIFIC MATERIAL. A SOIL SAMPLE MUST BE SUBMITTED TO THE MANUFACTURER TO COVERAGE: DETERMINE PROPER APPLICATION RATES.

INSTALLATION: PREPARE THE SITE BY FILLING IN GULLIES, RILLS AND LOW SPOTS. APPLY "SILT STOP" POWER (DRY) OVER DRY GROUND WITH A SEED/FERTILIZER SPREADER. 3. SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (e.g. SLOPE, CHANNEL AND FLOW VELOCITY).

MAINTENANCE: 1. DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION. 2. IF ANY AREA SHOWS EROSION, REPAIR THE GRADE AND RE-APPLY "SILT STOP" POWDER AND RE-LAY AND STAPLE 3. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY.

GEOTEXTILES

NORTH AMERICAN GREEN - SC 150 or DS 150 BLANKET SC 150 WHEN PLACEMENT OCCURS IN THE FALL/WINTER AND WHEN DURABILITY IS REQUIRED DS 150 DEGRADES MORE RAPIDLY, ALLOWING FOR SOONER MOWING OF THE STABILIZED AREA

EROSION CONTROL BLANKET (SURFACE-APPLIED)

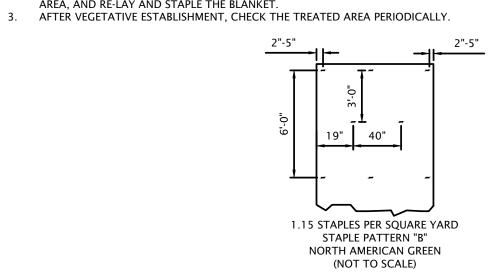
ANCHORING: STAPLES AS RECOMMENDED BY THE MANUFACTURER. FOR NORTH AMERICAN GREEN, USE STAPLE PATTERN "B". SEE CHART

INSTALLATION: 1. SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (e.g. SLOPE, CHANNEL, FLOW VELOCITY). 2. INSTALL ANY PRACTICES NEEDED TO CONTROL EROSION AND RUNOFF, SUCH AS TEMPORARY OR PERMANENT DIVERSION, SEDIMENT BASIN OR TRAP, SILT FENCE, AND/OR STRAW BALE DAM.

GRADE THE SITE AS SPECIFIED IN THE CONSTRUCTION PLAN. ADD TOPSOIL WHERE APPROPRIATE. PREPARE THE SEEDBED, FERTILIZE (AND LIME IF NEEDED) AND SEED THE AREA IMMEDIATELY AFTER GRADING. FOLLOW MANUFACTURER'S DIRECTIONS AND LAY THE BLANKETS ON THE SEEDED AREA SUCH THAT THEY ARE IN CONTINUOUS CONTACT WITH THE SOIL AND THAT THE UPSLOPE OR UPSTREAM ONES OVERLAP THE LOWER ONES BY

7. TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL, AND TAMP DOWN 8. ANCHOR THE BLANKETS AS SPECIFIED BY THE MANUFACTURER.

1. DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET. 2. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-LAY AND STAPLE THE BLANKET.

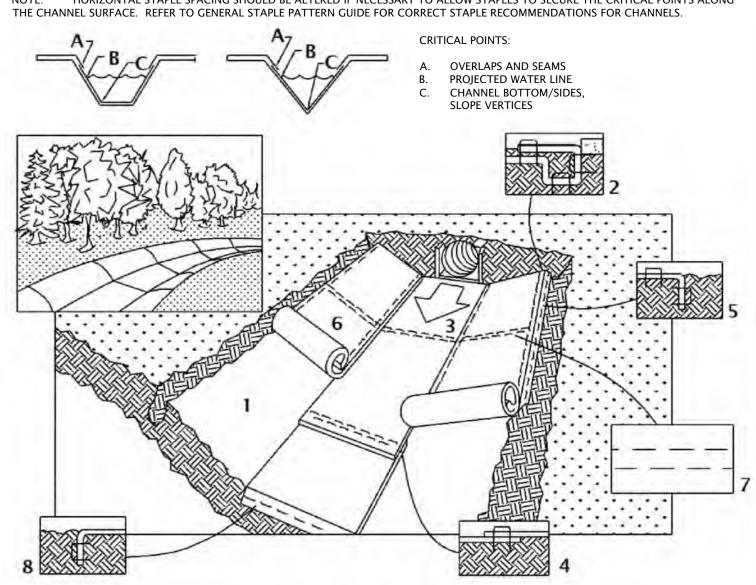


EROSION CONTROL BLANKET (CHANNEL APPLICATION)

DETAIL SOURCE: NORTH AMERICAN GREEN

TRENCH AFTER STAPLING.

NOTE: HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG



PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6-INCH DEEP BY 6-INCH WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.

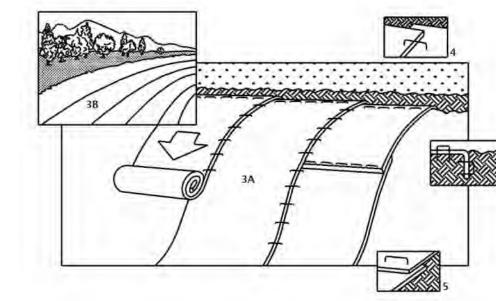
4. PLACE BLANKETS END OVER END (SHINGLE-STYLE) WITH A 6-INCH OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4 INCHES APART TO SECURE BLANKETS. 5. FULL LENGTH EDGE OF BLANKETS AT THE TOP OF SIDE SLOPES MUST BE ANCHORED IN 6-INCH DEEP BY 6-INCH WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4 INCHES OVER THE CENTER OF BLANKET AND STAPLED (2 INCHES FOR C350 7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 FT. TO 40 FT. INTERVALS. USE A ROW OF STAPLES 4 INCHES APART OVER ENTIRE WIDTH OF CHANNEL. PLACE A SECOND ROW 4 INCHES BELOW THE FIRST ROW IN A STAGGERED

8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6-INCH DEEP BY 6-INCH WIDE TRNECH. BACKFILL AND COMPACT THE

EROSION CONTROL BLANKET (SIDE SLOPE APPLICATION)

DETAIL SOURCE: NORTH AMERICAN GREEN



REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE RECOMMENDATIONS FOR CHANNELS.

PREPARE SOIL BEFORE INSTALLING BLANKETS INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED. WHEN USING CELL-O-SEED, DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET 6-INCHEDEEP BY 6-INCH WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. ROLL THE BLANKETS DOWN OR HORIZONTALLY ACROSS THE SLOPE.

THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH AN APPROXIMATELY 2-INCH OVERLAP. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE-STYLE) WITH AN APPROXIMATELY 4-INCH OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12 INCHES APART.

RIP RAP AT PIPE OUTLET

MATERIAL: HARD, ANGULAR AND WEATHER-RESISTANT, HAVING A SPECIFIC GRAVITY OF AT LEAST 2.5 GRADATION: WELL-GRADED STONE, 50% (BY WEIGHT LARGER THAN THE SPECIFIED d50; HOWEVER, THE LARGEST PIECES SHOULD NOT EXCEED TWO TIMES THE SPECIFIED d50 AND NO MORE THAN 15% OF THE PIECES (BY WEIGHT) SHOULD BE LESS THAN 3

USE GEOTEXTILE FABRIC FOR STABILIZATION AND FILTRATION OR SAND/GRAVEL LAYER PLACED UNDER ALL PERMANENT RIP FILTER: 2:1 OR FLATTER, UNLESS APPROVED IN THE EROSION AND SEDIMENT CONTROL PLAN. SLOPE:

SUBGRADE PREPARATION REMOVE BRUSH, TREES, STUMPS AND OTHER DEBRIS.

EXCAVATE ONLY DEEP ENOUGH FOR BOTH FILTER AND RIP RAP. OVER-EXCAVATION INCREASES THE AMOUNT OF COMPACT ANY FILL MATERIAL TO THE DENSITY OF THE SURROUNDING UNDISTURBED SOIL. 4. SMOOTH THE GRADED FOUNDATION.

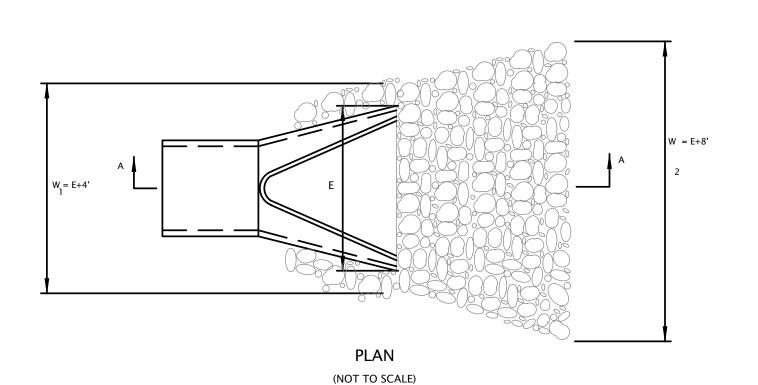
FILTER PLACEMENT

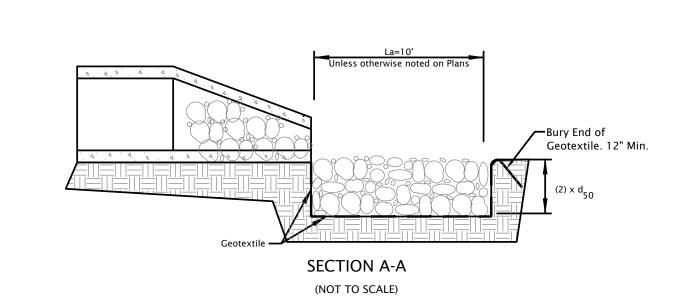
1. IF USING GEOTEXTILE FABRIC, PLACE IT ON THE SMOOTHED FOUNDATION, OVERLAP THE EDGES AT LEAST 12 INCHES AND SECURE WITH ANCHOR PINS SPACED EVERY 3 FEET ALONG THE OVERLAP. 2. IF USING A SAND/GRAVEL FILTER, SPREAD THE WELL-GRADED AGGREGATE IN A UNIFORM LAYER TO THE REQUIRED THICKNESS (6 INCHES MINIMUM); IF TWO OR MORE LAYERS ARE SPECIFIED, PLACE THE LAYER OF SMALLER GRADATION FIRST AND AVOID MIXING THE LAYERS.

RIP RAP PLACEMENT IMMEDIATELY AFTER INSTALLING THE FILTER, ADD THE RIP RAP TO FULL THICKNESS IN ONE OPERATION. DO NOT DUMP THROUGH CHUTES OR USE ANY METHOD THAT CAUSES SEGREGATION OF ROCK SIZES OR THAT WILL DISLODGE OR DAMAGE THE UNDERLYING FILTER MATERIAL.

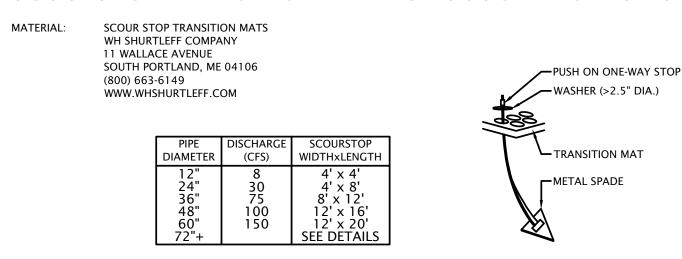
IF FABRIC IS DAMAGED, REMOVE THE RIP RAP AND REPAIR BY ADDING ANOTHER LAYER OF FABRIC, OVERLAPPING THE 3. PLACE SMALLER ROCK IN VOIDS TO FORM A DENSE, UNIFORM AND WELL-GRADED MASS. SELECTIVE LOADING AT THE QUARRY AND SOME HAND PLACEMENT MAY BE NEEDED TO ENSURE AN EVEN DISTRIBUTION OF ROCK MATERIAL. 4. BLEND THE ROCK SURFACE SMOOTHLY WITH THE SURROUNDING AREA TO ELIMINATE PROTRUSIONS OR OVER-FALLS.

1. INSPECT PERIODICALLY FOR DISPLACED ROCK MATERIAL, SLUMPING AND EROSION AT EDGES, ESPECIALLY DOWN-STREAM OR DOWN-SLOPE.

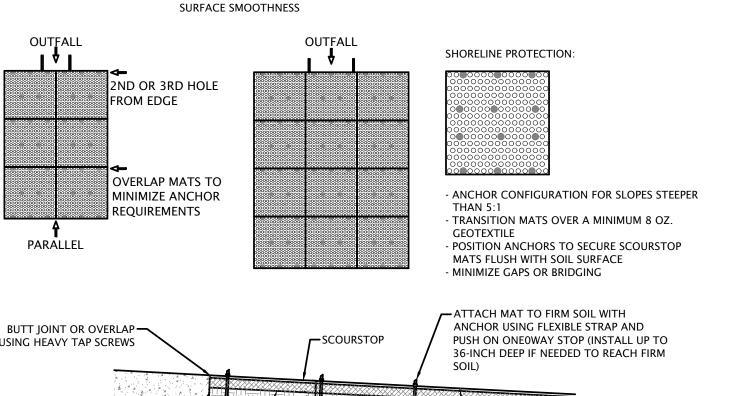




SCOURSTOP TRANSITION MAT FOR SCOUR PROTECTION



ANCHOR REQUIREMENTS*: FIRST ROW OF SCOURSTOP MATS MINIMUM OF 8 ANCHORS SECTION ROW OF SCOURSTOP MATS -MINIMUM OF 5 ANCHORS * TO ENSURE CONSISTENT CONTACT WITH THE SOIL, EXCEED THE MINIMUM ANCHOR REQUIREMENT AT INSTALLATION OR IMPROVE SOIL



EDGE OF HARD SURFACE ADJACENT + DOWNSTREAM MATS MAY BE SHINGLED WITH SOILS SHOULD BE GRADED SO 6-INCH OVERLAP OR INSTALLED WITH BUTT JOINT SURFACE OF MAT EVEN WITH TOP OF SURFACE AFTER INSTALLATION PREFERRED INSTALLATION WITH SOD INSTALL TRANSITION MAT OVER TRM OR SOD. GRADE SHOULD BE SMOOTH AND UNIFORM.

GRADE OUT ANY RILLS FOR CONSISTENT SOIL STRUCTURE PRIOR TO INSTALLATION NOT TO SCALE

INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. DO NOT SCALE DRAWINGS.

RIP-RAP FOR SCOUR PROTECTION

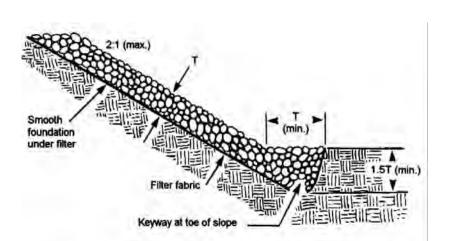
HARD, ANGULAR AND WEATHER-RESISTANT, HAVING A SPECIFIC GRAVITY OF AT LEAST 2.5 WELL-GRADED STONE, 50% (BY WEIGHT LARGER THAN THE SPECIFIED d50; HOWEVER, THE LARGEST PIECES SHOULD GRADATION: NOT EXCEED TWO TIMES THE SPECIFIED d50 AND NO MORE THAN 15% OF THE PIECES (BY WEIGHT) SHOULD BE LESS USE GEOTEXTILE FABRIC FOR STABILIZATION AND FILTRATION OR SAND/GRAVEL LAYER PLACED UNDER ALL PERMANENT RIP RAP INSTALLATIONS. 2:1 OR FLATTER, UNLESS APPROVED IN THE EROSION AND SEDIMENT CONTROL PLAN.

MINIMUM THICKNESS: TWO TIMES THE SPECIFIED d50 STONE DIAMETER. SUBGRADE PREPARATION

REMOVE BRUSH, TREES, STUMPS AND OTHER DEBRIS. EXCAVATE ONLY DEEP ENOUGH FOR BOTH FILTER AND RIP RAP. OVER-EXCAVATION INCREASES THE AMOUNT OF

COMPACT ANY FILL MATERIAL TO THE DENSITY OF THE SURROUNDING UNDISTURBED SOIL.

CUT KEYWAY IN STABLE MATERIAL AT THE BASE OF THE SLOPE TO REINFORCE TOE. KEYWAY DEPTH SHOULD BE 1.5 TIMES THE DESIGN THICKNESS OF THE RIP RAP AND SHOULD EXTEND A HORIZONTAL DISTANCE EQUAL TO THE DESIGN THICKNESS. SMOOTH THE GRADED FOUNDATION



FILTER PLACEMENT

1. IF USING GEOTEXTILE FABRIC, PLACE IT ON THE SMOOTHED FOUNDATION, OVERLAP THE EDGES AT LEAST 12 INCHES AND SECURE WITH ANCHOR PINS SPACED EVERY 3 FEET ALONG THE OVERLAP. IF USING A SAND/GRAVEL FILTER, SPREAD THE WELL-GRADED AGGREGATE IN A UNIFORM LAYER TO THE REQUIRED THICKNESS (6 INCHES MINIMUM); IF TWO OR MORE LAYERS ARE SPECIFIED, PLACE THE LAYER OF SMALLER GRADATION FIRST AND AVOID MIXING THE LAYERS.

RIP RAP PLACEMENT IMMEDIATELY AFTER INSTALLING THE FILTER, ADD THE RIP RAP TO FULL THICKNESS IN ONE OPERATION. DO NOT DUMP THROUGH CHUTES OR USE ANY METHOD THAT CAUSES SEGREGATION OF ROCK SIZES OR THAT WILL DISLODGE

OR DAMAGE THE UNDERLYING FILTER MATERIAL 2. IF FABRIC IS DAMAGED, REMOVE THE RIP RAP AND REPAIR BY ADDING ANOTHER LAYER OF FABRIC, OVERLAPPING THE DAMAGED AREA BY 12 INCHES. 3. PLACE SMALLER ROCK IN VOIDS TO FORM A DENSE, UNIFORM AND WELL-GRADED MASS. SELECTIVE LOADING AT THE QUARRY AND SOME HAND PLACEMENT MAY BE NEEDED TO ENSURE AN EVEN DISTRIBUTION OF ROCK MATERIAL.

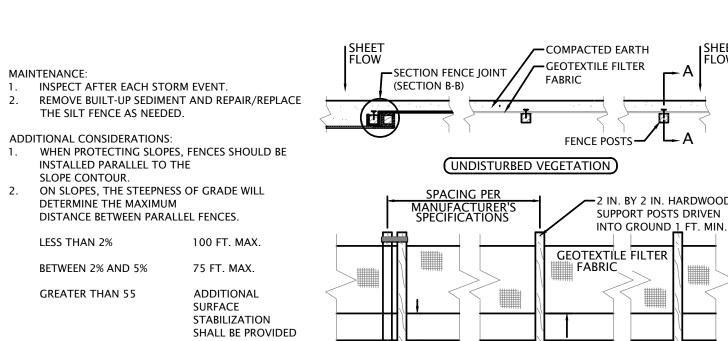
INSPECT PERIODICALLY FOR DISPLACED ROCK MATERIAL, SLUMPING AND EROSION AT EDGES, ESPECIALLY

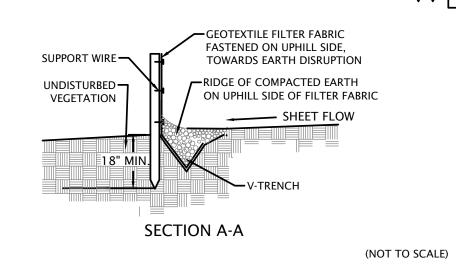
BLEND THE ROCK SURFACE SMOOTHLY WITH THE SURROUNDING AREA TO ELIMINATE PROTRUSIONS OR OVER-FALLS.

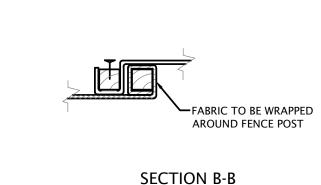
POOL AREA FLAT (LESS THAN 1% SLOPE), WITH SEDIMENT STORAGE OF 945 CU.FT./ACRE DISTURBED. ECONOMY BLUE STRIPE SILT FENCE WITH POSTS, MANUFACTURED BY MIDWEST CONSTRUCTION PRODUCTS AT (800) 532-2381 OR APPROVED EQUAL.

ANCHORING: 2 INCH BY 2 INCH HARDWOOD STAKES WITH A LENGTH EQUAL TO THE HEIGHT OF THE SILT FENCE PLUS 1 FOOT. INSTALLATION:

DRIVE STAKES 1 FT. (MINIMUM) INTO GROUND AND ATTACH FABRIC TO STAKES WITH STAPLER. BOTTOM OF FABRIC SHALL BE PLACED UNDER 6 INCHES COMPACTED SOIL TO PREVENT SEDIMENT FLOW UNDERNEATH THE FENCE. ENSURE THAT ALL SUPPORTING POSTS ARE ON THE DOWN SLOPE SIDE OF THE FENCING.



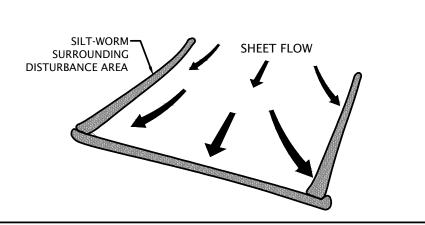




MATERIAL: SILT-WORM OR APPROVED EQUAL

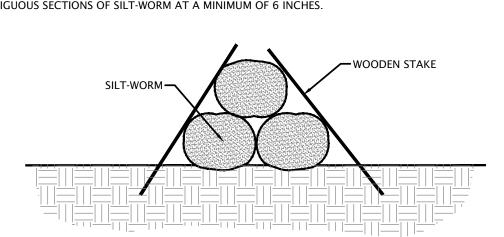
PERIMETER CONTROL

INSTALLATION: PLACE SILT-WORM DIRECLY ON TOP OF GRADE FOR GRADES UNDER 12%. ARRANGE PERIMETER CONTROL IN A MANNER THAT IS APPLIED PERPENDICULAR TO SHEET FLOW. OVERLAP CONTIGUOUS SECTIONS OF SILT WORM AT A MINIMUM OF 6 INCHES.



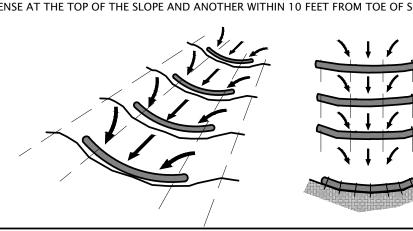
STACKING

INSTALLATION: PLACE SILT-WORM DIRECTLY ON TOP OF GRADE FOR GRADES UNDER 12%. STACK SILT-WORM IN A STAGGERED MANNER, AS SHOWN BELOW. 3. OVERLAP CONTIGUOUS SECTIONS OF SILT-WORM AT A MINIMUM OF 6 INCHES.



SLOPE INTERRUPTION / DITCH CHECK

PLACE SILT-WORM PERPENDICULAR TO SHEET FLOW AND CURL ENDS UP TOWARD TOP OF SLOPE. STAKE THE SILT-WORM EVERY 4 FEET AND OVERLAP THE ENDS BETWEEN 1 AND 2 FEET. PLACE A LINE OF DEFENSE AT THE TOP OF THE SLOPE AND ANOTHER WITHIN 10 FEET FROM TOE OF SLOPE.



		/			
SPACING FOR SLOPE APPLICATION					
SLOPE	9-inch	12-inch	18-inch	24-inch	
2% or less	70 ft.	80 ft.	N/A	N/A	
5%	30 ft.	60 ft.	80 ft.	N/A	
10%	20 ft.	30 ft.	70 ft.	80 ft.	
6:1	N/A	20 ft.	40 ft.	55 ft.	
4:1	N/A	20 ft.	30 ft.	30 ft.	
3:1	N/A	N/A	20 ft.	25 ft.	
2:1	N/A	N/A	20 ft.	20 ft.	

SILT-WORM MAINTENANCE GUIDELINES

 INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY 7 CALENDAR DAYS. • IF SILT-WORM TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.

NOTE: ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE. REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE SILT-WORM TO BULGE OR WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT-WORM AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE SILT-WORM AND

SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.

MATERIAL: STRAW, HAY, WOOD FIBER, CELLULOSE OR EXCELSIOR

WOOD HYDROMULCH FIBERS

OR EROSION CONTROL BLANKETS OR TURF REINFORCEMENT MATS, AS SPECIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN AT LEAST 75% OF THE SOIL SURFACE

ANCHORING: REQUIRED FOR STRAW OR HAY MULCH AND SOMETIMES EXCELSIOR TO PREVENT DISPLACEMENT BY WIND AND/OR WATER MATERIAL

> SHOULD BE DRY, UNCHOPPED, FREE OF UNDESIRABLE SPREAD BY HAND OR ANCHORED MUST BE CRIMPED OR ANCHORED WOOD FIBER OF CELLULOSE 1 TON/ACRE APPLY WITH A HYDROMULCHER AND USE WITH TACKING

LONG FIBER WOOD (EXCELSIOR) 0.5 TO 0.75 TON/ACRE ANCHOR IN AREAS SUBJECT TO WIND INSTALLATION: APPLY MULCH AT THE RECOMMENDED RATE

SPREAD UNIFORMLY BY HAND, HAY FORK, MULCH BLOWER OR HYDROMULCHER. AFTER SPREADING, NO MORE THAN 25% OF THE GROUND SURFACE SHOULD BE VISIBLE. IF STRAW OR HAY IS USED, ANCHOR IT IMMEDIATELY IN ONE OF THE FOLLOWING WAYS:

DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION. IF ANY AREA SHOWS EROSION, REPAIR THE GRADE AND RE-APPLY "SILT STOP" POWDER AND RE-LAY AND STAPLE

AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY. ANCHORING METHOD RIMP OR PUNCH THE STRAW OR HAY INTO THE SOIL 2 TO 4 INCHES. OPERATE MACHINERY ON THE CONTOUR OF FARM DISK (DULL, SERRATED AND SET STRAIGHT) CLEATING WITH DOZER TRACKS OPERATE DOZER UP AND DOWN SLOPE, NOT ACROSS OR ELSE THE TRACKS WILL FORM RILLS.

USE IN AREAS OF CONCENTRATED FLOW. ASPHALT EMULSION EMULSIFIED ASPHALT SHOULD CONFORM TO THE REQUIREMENTS OF ASTEM SPEC. #977. APPLY WITH SUITABLE EOUIPMENT AT A RATE OF 0.05 GAL/SY. DO NOT USE IN AREAS OF CONCENTRATED FLOW.

APPLY 1 TO 2 TONS/ACRE USING A HYDROMULCHER AT A

ACCORDING TO CONTRACTOR SPECIFICATIONS). DO NOT

RATE OF 750 LBS./ACRE WITH A TACKING AGENT (OR

SYNTHETIC TACKIFIER, BINDER OR APPLY ACCORDING TO MANUFACTURER'S SOIL STABILIZER RECOMMENDATIONS BIODEGRADABLE NETTING (POLYPROPYLENE OR APPLY OVER MULCH AND STAPLE WITH 6 TO 8 INCH WIRE SIMILAR MATERIAL)* 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 NETTING PARALLEL TO THE DIRECTION OF FLOW. ON OTHER SLOPES, LAY NETTING EITHER PARALLEL OR PERPENDICULAR TO DIRECTION OF FLOW. EDGES OF ADIACENT NETTING STRIPS SHOULD OVERLAP 4 TO 6 INCHES WITH THE STRIP ON THE UPGRADE SIDE OF ANY LATERAL WATER FLOW ON TOP. INSTALLATION DETAILS ARE SITE SPECIFIC, SO FOLLOW THE MANUFACTURER'S DIRECTIONS.

INSPECT AFTER STORM EVENTS TO CHECK FOR MOVEMENT OF MULCH OR FOR EROSION. IF WASHOUT, BREAKAGE, OR EROSION IS PRESENT, REPAIR THE SURFACE, THEN RE-SEED, RE-MULCH AND, IF APPLICABLE. INSTALL NEW NETTING. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.

SOIL ROUGHENING

SITING AND DESIGN CONSIDERATIONS

MAINTENANCE

SOIL ROUGHENING IS A TEMPORARY EROSION CONTROL PRACTICE OFTEN USED IN CONJUNCTION WITH GRADING. SOIL ROUGHENING INVOLVES INCREASING THE RELIEF OF A BARE SOIL SURFACE WITH HORIZONTAL GROOVES BY EITHER STAIR-STEPPING (RUNNING PARALLEL TO THE CONTOLIR OF THE LAND) OR USING CONSTRUCTION FOLLIPMENT TO TRACK THE SURFACE, SLOPES THAT ARE NOT FINE GRADED AND LEFT IN A ROUGHENED CONDITION CAN ALSO REDUCE EROSION. SOIL ROUGHENING REDUCES RUNOFF VELOCITY, INCREASES INFILTRATION, REDUCES EROSION, TRAPS SEDIMENT, AND PREPARES THE SOIL FOR SEEDING AND PLANTING BY GIVING SEED AN OPPORTUNITY TO TAKE

SOIL ROUGHENING IS APPROPRIATE FOR ALL SLOPES, BUT WORKS ESPECIALLY WELL ON SLOPES GREATER THAN 3:1, ON PILES OF EXCAVATED SOIL, AND IN AREAS WITH HIGHLY ERODIBLE SOILS. THIS TECHNIQUE IS ESPECIALLY APPROPRIATE FOR SOILS THAT ARE FREQUENTLY DISTURBED, BECAUSE ROUGHENING IS RELATIVELY EASY. TO SLOW EROSION, ROUGHEN THE SOIL AS SOON AS POSSIBLE AFTER THE VEGETATION HAS BEEN REMOVED FROM THE SLOPE OR IMMEDIATELY AFTER GRADING ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY). USE THIS PRACTICE IN CONJUNCTION WITH SEEDING, PLANTING, AND TEMPORARY MULCHING TO STABILIZE AN AREA, A COMBINATION OF SURFACE ROUGHENING AND VEGETATION IS APPROPRIATE FOR STEEPER SLOPES AND SLOPES THAT WILL BE LEFT BARE FOR LONGER PERIODS OF TIME.

ROUGHENED SLOPE SURFACES HELP ESTABLISH VEGETATION, IMPROVE INFILTRATION, AND DECREASE RUNOFF VELOCITY. A ROUGH SOIL SURFACE ALLOWS SURFACE PONDING THAT PROTECTS LIME, FERTILIZER, AND SEED AND DECREASES EROSION POTENTIAL. GROOVES IN THE SOIL ARE COOLER AND PROVIDE MORE FAVORABLE MOISTURE CONDITIONS THAN HARD, SMOOTH SURFACES. THESE CONDITIONS PROMOTE SEED GERMINATION AND VEGETATIVE GROWTH. AVOID EXCESSIVE SOIL COMPACTING, BECAUSE THIS INHIBITS VEGETATION GROWTH AND CAUSES HIGHER RUNOFF VELOCITY. LIMIT ROUGHENING WITH TRACKED MACHINERY TO SANDY SOILS THAT DO NOT COMPACT EASILY; ALSO, AVOID TRACKING ON HEAVY CLAY SOILS, ESPECIALLY WHEN WET. SEED ROUGHENED AREAS AS QUICKLY AS POSSIBLE, AND FOLLOW PROPER PROCEDURES. DEPENDING ON THE TYPE OF SLOPE AND THE AVAILABLE EQUIPMENT. USE DIFFERENT METHODS FOR ROUGHENING SOIL ON A SLOPE. THESE INCLUDE STAIR-STEP GRADING, GROOVING, AND TRACKING. WHEN CHOOSING A METHOD, CONSIDER FACTORS SUCH AS SLOPE STEEPNESS. MOWING REQUIREMENTS, WHETHER THE SLOPE IS FORMED BY CUTTING OR FILLING, AND AVAILABLE EQUIPMENT. CHOOSE FROM THE FOLLOWING METHODS FOR SURFACE ROUGHENING:

• CUT SLOPE ROUGHENING FOR AREAS THAT WILL NOT BE MOWED. USE STAIR-STEP GRADES OR GROOVE-CUT SLOPES FOR GRADIENTS STEEPER THAN 3:1. USE STAIR-STEP GRADING ON ANY ERODIBLE MATERIAL THAT IS SOFT ENOUGH TO BE RIPPED WITH A BULLDOZER. ALSO. IT IS WELL SUITED FOR SLOPES CONSISTING OF SOFT ROCK WITH SOME SUBSOIL. MAKE THE VERTICAL CUT DISTANCE LESS THAN THE HORIZONTAL DISTANCE, AND SLOPE THE HORIZONTAL PORTION OF THE STEP SLIGHTLY TOWARD THE VERTICAL WALL. KEEP INDIVIDUAL VERTICAL CUTS LESS THAN 2 FEET DEEP IN SOFT MATERIALS AND LESS THAN 3 FEET DEEP IN ROCKY MATERIALS.

GROOVING. THIS TECHNIQUE USES MACHINERY TO CREATE A SERIES OF RIDGES AND DEPRESSIONS THAT RUN ACROSS THE SLOPE ALONG THE CONTOUR. MAKE GROOVES USING ANY APPROPRIATE IMPLEMENT THAT CAN BE SAFELY OPERATED ON THE SLOPE. SUCH AS DISKS, TILLERS, SPRING HARROWS, OR THE TEETH ON A FRONT-END LOADER BUCKET. MAKE THE GROOVES LESS THAN 3 INCHES DEEP AND LESS THAN 15 INCHES APART.

FILL SLOPE ROUGHENING FOR AREAS THAT WILL NOT BE MOWED. FILL SLOPES WITH A GRADIENT STEEPER THAN 3:1 SHOULD BE PLACED IN LIFTS LESS THAN 9 INCHES, AND PROPERLY COMPACT EACH LIFT. THE FACE OF THE SLOPE SHOULD CONSIST OF LOOSE, UNCOMPACTED FILL 4 TO 6 INCHES DEEP. IF NECESSARY, ROUGHEN THE FACE OF THE SLOPES BY GROOVING THE SURFACE AS DESCRIBED ABOVE. DO NOT BLADE OR SCRAPE THE FINAL SLOPE FACE.

CUTS, FILLS, AND GRADED AREAS THAT WILL BE MOWED. MAKE MOWED SLOPES NO STEEPER THAN 3:1. ROUGHEN THESE AREAS WITH SHALLOW GROOVES LESS THAN 10 INCHES APART AND DEEPER THAN 1 INCH USING NORMAL TILLING, DISKING, OR HARROWING EQUIPMENT (A CULTIPACKER-SEEDER CAN ALSO BE USED). EXCESSIVE ROUGHNESS IS UNDESIRABLE WHERE MOWING IS PLANNED.

ROUGHENING WITH TRACKED MACHINERY. TO AVOID UNDUE COMPACTION OF THE SOIL SURFACE, LIMIT ROUGHENING WITH TRACKED MACHINERY ONLY TO SANDY SOILS. OPERATE TRACKED MACHINERY PERPENDICULARLY TO THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS IN THE SOIL. TRACKING IS GENERALLY NOT AS EFFECTIVE AS OTHER ROUGHENING METHODS.

SOIL ROUGHENING IS NOT APPROPRIATE FOR ROCKY SLOPES. TRACKED MACHINERY CAN EXCESSIVELY COMPACT THE SOIL. TYPICALLY, SOIL ROUGHENING IS EFFECTIVE ONLY FOR GENTLE OR SHALLOW DEPTH RAINS. IF ROUGHENING IS WASHED AWAY IN A HEAVY STORM, RE-ROUGHEN THE SURFACE AND RESEED.

MAINTENANCE CONSIDERATIONS:

INSPECT ROUGHENED AREAS AFTER STORMS TO SEE IF RE-ROUGHENING IS NEEDED. REGULAR INSPECTION SHOULD INDICATE WHERE ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES ARE NEEDED. IF RILLS (SMALL WATERCOURSES THAT HAVE STEEP SIDES AND ARE USUALLY ONLY A FEW INCHES DEEP) APPEAR, FILL, REGRADE, AND RESEED THEM IMMEDIATELY. USE PROPER METHODS.

SOIL ROUGHENING PROVIDES MODERATE EROSION PROTECTION FOR BARE SOILS WHILE VEGETATIVE COVER IS BEING ESTABLISHED. IT IS INEXPENSIVE AND SIMPLE FOR SHORT-TERM EROSION CONTROL WHEN USED WITH OTHER EROSION AND SEDIMENT CONTROLS.

TOPSOIL (SALVAGE AND UTILIZATION)

SALVAGING AND STOCKPILING:

DETERMINE DEPTH AND SUITABILITY OF TOPSOIL AT THE SITE. PRIOR TO STRIPPING TOPSOIL, INSTALL ANY SITE-SPECIFIC DOWNSLOPE PRACTICES NEEDED TO CONTROL RUNOFF AND SEDIMENTATION. REMOVE THE SOIL MATERIAL NO DEEPER THAN WHAT THE COUNTY SOIL SURVEY DESCRIBES AS "SURFACE SOIL" (i.e., A OR AP HORIZON). STOCKPILE THE MATERIAL IN ACCESSIBLE LOCATIONS THAT NEITHER INTERFERE WITH OTHER CONSTRUCTION ACTIVITIES NOR BLOCK NATURAL DRAINAGE: AND INSTALL SILT FENCES. STRAW BALES, OR OTHER BARRIERS TO TRAP SEDIMENT, (SEVERAL SMALLER PILES AROUND THE CONSTRUCTION SITE ARE USUALLY MORE EFFICIENT AND EASIER TO CONTAIN THAN ONE LARGE PILE.)

PRIOR TO APPLYING TOPSOIL, GRADE THE SUBSOIL AND ROUGHEN THE TOP 3-4 IN. BY DISKING. THIS HELPS THE TOPSOIL BOND WITH THE SUBSOIL DO NOT APPLY TOPSOIL WHEN THE SITE IS WET, MUDDY OR FROZEN, BECAUSE IT MAKES SPREADING DIFFICULT,

INHIBITS BONDING, AND CAN CAUSE COMPACTION PROBLEMS. APPLY TOPSOIL EVENLY TO A DEPTH OF AT LEAST 4 IN. (8-12 IN. IF THE UNDERLYING MATERIAL IS BEDROCK, LOOSE SAND, ROCK FRAGMENTS, GRAVEL OR OTHER UNSUITABLE SOIL MATERIAL) COMPACT SLIGHTLY TO IMPROVE CONTACT WITH THE SUBSOIL. AFTER SPREADING, GRADE AND STABILIZE.

IF SOIL IS STOCKPILED FOR MORE THAN 6 MOS., IT SHOULD BE TEMPORARILY SEEDED OR COVERED WITH A TARP OR SURROUNDED BY A SEDIMENT

INSPECT NEWLY TOPSOILED AREAS FREQUENTLY UNTIL VEGETATION IS ESTABLISHED. REPAIR ERODED OR DAMAGED AREAS AND REPLANT.

TEMPORARY SEEDING

THESE INSTALLATION PRACTICES ARE NEEDED TO CONTROL EROSION, SEDIMENTATION, AND WATER RUNOFF, SUCH AS TEMPORARY AND PERMANENT DIVERSIONS, SEDIMENT TRAPS OR BASINS, SILT FENCES, AND TRIANGULAR SILT DIKES. GRADE THE SITE AS SPECIFIED IN THE CONSTRUCTION PLAN.

SEEDBED PREPARATION: FERTILIZE AS REQUIRED. WORK THE FERTILIZER INTO THE SOIL 2-4 IN. DEEP WITH A DISK OR RAKE OPERATED ACROSS THE SLOPE

SELECT A SEEDING MIXTURE AND RATE FROM THE TABLE AND PLANT AT DEPTH AND ON DATES SHOWN. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER-SEEDER OR BY BROADCASTING, AND COVER TO THE DEPTH SHOWN. IF DRILLING OR BROADCASTING, FIRM THE SEEDBED WITH A ROLLER OR CULTIPACKER. MULCH SEEDED AREAS TO INCREASE SEEDING SUCCESS. UPON COMPLETION OF THE ROUGH GRADING, ALL AREAS AFFECTED BY CONSTRUCTION SHALL BE TEMPORARILY SEEDED IF THEY WILL REMAIN DORMANT FOR GREATER THAN 7 DAYS. THESE AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF REMAINING DORMANT AND EROSION CONTROL BLANKETS SHALL BE INSTALLED ON SIDE SLOPES AS SHOWN ON THE PLANS.

INSPECT PERIODICALLY AFTER PLANTING TO SEE THAT VEGETATIVE STANDS ARE ADEQUATELY ESTABLISHED, RE-SEED IF NECESSARY. CHECK FOR EROSION DAMAGE AFTER STORM EVENTS AND REPAIR, RESEED AND MULCH IF NECESSARY. TOP-DRESS FALL SEEDED WHEAT OR RYE SEEDING WITH 50 LBS./ACRE OF NITROGEN IN FEBRUARY OR MARCH IF NITROGEN DEFICIENCY IS APPARENT. TEMPORARY SEEDING RECOMMENDATIONS

TEMPORARY SEEDING RECOMMENDATION RATE/ACRE PLANTING DEPTH **OPTIMUM DATES**** WHEAT OR RYE 1 TO 1.5 INCHES SEPTEMBER 15 TO OCTOBER 30 MARCH 1 TO APRIL 15 SPRING OATS ANNUAL RYEGRASS 40 LBS. 0.25 INCH MARCH 1 TO MAY 1 1 TO 2 INCHES MAY 1 TO JULY 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

PERMANENT SEEDING

PERMANENTLY SEED ALL FINAL GRADE AREAS (E.G., LANDSCAPE BERMS, DRAINAGE SWALES, EROSION CONTROL STRUCTURES, ETC.) AS EACH IS COMPLETED AND ALL AREAS WHERE ADDITIONAL WORK IS NOT SCHEDULED FOR A PERIOD OF MORE THAN A YEAR.

SITE PREPARATION: THESE INSTALLATION PRACTICES ARE NEEDED TO CONTROL EROSION. SEDIMENTATION, AND WATER RUNOFF, SUCH AS TEMPORARY AND PERMANENT DIVERSIONS. SEDIMENT TRAPS OR BASINS. SILT FENCES, AND TRIANGULAR SILT DIKES. GRADE THE SITE AS SPECIFIED IN THE CONSTRUCTION PLAN AND FILL IN DEPRESSIONS THAT CAN COLLECT WATER. ADD TOPSOIL TO ACHIEVE NEEDED DEPTH FOR ESTABLISHMENT OF VEGETATION.

** SEEDING DONE OUTSIDE THE OPTIMUM DATES INCREASES THE CHANCE OF SEEDING FAILURE

SEEDBED PREPARATION: FERTILIZE AS REQUIRED.

TILL THE SOIL TO OBTAIN A UNIFORM SEEDBED, WORKING THE FERTILIZER INTO THE SOIL 2-4 IN. DEEP WITH A DISK OR RAKE OPERATED ACROSS THE

OPTIMUM SEEDING DATES ARE MARCH 1-MAY 10 AND AUGUST 10-SEPTEMBER 30. PERMANENT SEEDING DONE BETWEEN MAY 10 AND AUGUST 10 MAY NEED TO BE IRRIGATED. AS AN ALTERNATIVE, USE TEMPORARY SEEDING UNTIL THE PREFERRED DATE FOR PERMANENT SEEDING. SELECT A SEEDING MIXTURE AND RATE FROM THE TABLE AND PLANT AT DEPTH AND ON DATES SHOWN. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER-SEEDER OR BY BROADCASTING, AND COVER TO THE DEPTH SHOWN.

IF DRILLING OR BROADCASTING, FIRM THE SEEDBED WITH A ROLLER OR CULTIPACKER. MULCH SEEDED AREAS. USE EROSION CONTROL BLANKETS ON SLOPING AREAS. IF SEEDING IS DONE WITH A HYDROSEEDER, FERTILIZER AND MULCH CAN BE APPLIED WITH THE SEED IN A SLURRY MIXTURE.

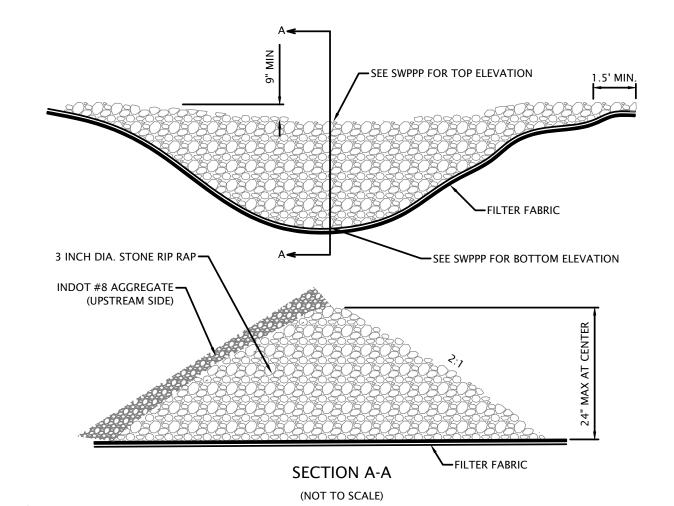
1. INSPECT PERIODICALLY AFTER PLANTING TO SEE THAT VEGETATIVE STANDS ARE ADEQUATELY ESTABLISHED, RE-SEED

CHECK FOR EROSION DAMAGE AFTER STORM EVENTS AND REPAIR, RESEED AND MULCH IF NECESSARY

PERMANENT SEEDING RECOMMENDATION 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 DROUGHT

SEED SPECIES AND MIXTURES RATE/ACRE OPTIMUM SOIL pH OPEN AND DISTURBED AREAS (REMAINING IDLE FOR MORE THAN ONE YEAR) PERENNIAL RYEGRASS 5.6 TO 7.0 + WHITE OR LADINO DOVER 1 TO 2 LBS. KENTUCKY BLUEGRASS 5.5 TO 7.5 + SMOOTH BROMEGRASS + PERENNIAL RYEGRASS + WHITE OR LADINO DOVER

RUNOFF CONTROL MEASURES RIP-RAP CHECK DAMS



INSPECT AFTER EACH STORM EVENT. REMOVE BUILT-UP SEDIMENT AND REPAIR/REPLACE THE CHECK DAMS AS NEEDED.

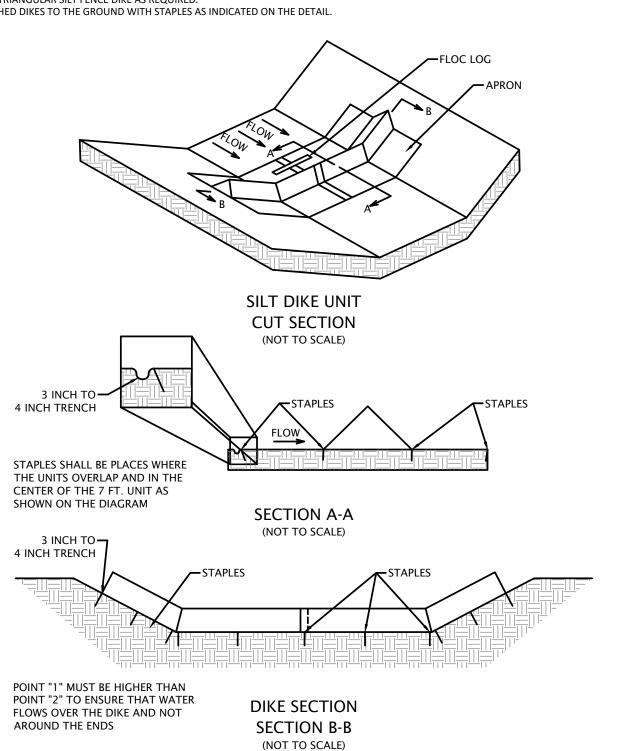
TRIANGULAR SILT FENCE DIKE - CHECK DAMS

THE TRIANGULAR-SHAPED INNER MATERIAL SHALL BE URETHANE FORM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL AND ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 2 TO 3 FEET THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE #11 GAUGE WIRE AND BE AT LEAST 6 TO 8 INCHES LONG. STAPLES SHALL BE PLACED AS INDICATED ON THE INSTALLATION DETAIL.

INSTALLATION: PLACE TRIANGULAR SILT FENCE DIKE AS REQUIRED. 2. ATTACHED DIKES TO THE GROUND WITH STAPLES AS INDICATED ON THE DETAIL

INSPECT AFTER EACH STORM EVENT.

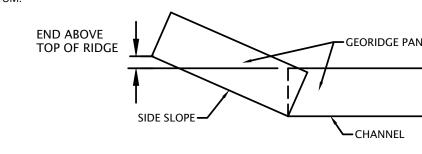
REMOVE BUILT-UP SEDIMENT AND REPAIR/REPLACE THE CHECK DAMS AS NEEDED.



GEORIDGE DITCH BERM - CHECK DAMS

GEORIDGE OR GEORIDGE BIO BY NILEX PRODUCTS. AN HOPE PRODUCT THAT SERVES TO DISSIPATE WATER ENERGY WITHIN A DITCH OR CHANNEL GEORIDGE IS TO RE USED IN APPLICATIONS WHERE THE MEASURE WILL BE REMOVED AFTER THE CHANNEL IS STABILIZED. GEORIDGE BIO CAN BE USED WHEN THE MEASURE CAN BE LEFT TO DECOMPOSE IN LIEU OF BEING REMOVED.

1. PLACE AN EROSION CONTROL BLANKET (ECB), LAID PARALLEL WITH THE CHANNEL DIRECTION, IN THE AREA WHERE THE GEORIDGE IS TO BE PLACED. ECB SHALL BE APPROPRIATE FOR THE CHANNEL SLOPE, VOLUME AND VELOCITY. ECB SHALL BE SECURED WITH A 4" TRENCH AT THE UPSTREAM EDGE, WITH MINIMUM 6-INCH STAPLES PLACED 21-INCH O.C. ALONG THE UPSTREAM AND DOWNSTREAM EDGES. 2. PLACE GEORIDGE BERM IN THE MIDDLE OF THE ECB, PERPENDICULAR TO THE CHANNEL FLOW DIRECTION, AND ANCHOR WITH 10-INCH SPIRAL SPIKES. A MINIMUM OF 3 ANCHORS SHALL BE USED ON THE UPSTREAM SIDE AND 2 ANCHORS ON THE DOWNSTREAM SIDE. IF MORE THAN ONE GEORIDGE BERM PANEL IS REQUIRED TO SPAN THE CHANNEL, LINE UP THE ANCHORING HOLES FOR INSTALLATION OF THE ANCHORS. 3. WHEN PLACING THE GEORIDGE PANEL ON THE SIDE SLOPE OF THE CHANNEL, THE BOTTOM OF THE PANELS SHOULD MEET WITH THE RIDGE BEING OVERLAPPED. THIS WILL PREVENT WATER FROM PASSING THROUGH THE BERM. ADDITIONALLY, THE OUTSIDE EDGE OF THE PANEL ON THE SIDE SLOPE SHOULD BE INSTALLED SO THAT IT IS HIGHER THAN THE TOP OF THE PANEL IN THE CHANNEL BOTTOM.



4. THE SPACING IS CALCULATED BY DIVIDING THE HEIGHT OF THE GEORIDGE BY THE GRADIENT OF THE CHANNEL SLOPE 9-INCH / 0.0.2 GRADIENT = 450 INCHES OR 37.5 FEFT

INSPECT AFTER EACH STORM EVENT.

INSTALLATION:

REMOVE BUILT-UP SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE GEORIDGE. REPAIR/REPLACE THE GEORIDGE AND THE EROSION CONTROL MAT AS NEEDED.

SEDIMENT CONTROL MEASURES **POLYMER SYSTEMS**

MATERIAL: APS 700 SERIES FLOC LOG OR EQUAL

INSTALLATION: THE FLOC LOG VENDOR SHALL SAMPLE THE WATER THAT IS TO BE TREATED WITH THE SYSTEM. THIS SAMPLE SHALL BE USED TO DETERMINE THE SITE-SPECIFIC POLYMER MIX THAT SHOULD BE USED. IN APPLICATIONS WHERE THE OBJECTIVE OF THIS MEASURE IS TO MEET THE TOTAL SUSPENDED SOLIDS REQUIREMENTS PRIOR TO COMPLETION OF THE DETENTION POND; I.E. THE SIDE SLOPES ARE NOT FULLY STABILIZED, DEWATERING THE POND FOR FURTHER EXPANSION, ETC., THE FLOC LOG SHOULD BE INSTALLED AT THE END OF THE OUTFALL PIPE AND A TEMPORARY MATERIAL SUCH AS GEOJUTE SHOULD BE PLACED DOWNSTREAM OF THE FLOC LOG PROVIDING A SEDIMENT SETTLING AREA. (SEE PLANS FOR SPECIFIC INSTALLATION LOCATIONS) IN APPLICATIONS WHERE THE OBJECTIVE OF THIS MEASURE IS TO MEET THE TOTAL SUSPENDED SOLIDS REQUIREMENTS AFTER THE DETENTION POND IS COMPLETED, THE FLOC LOG SHOULD BE INSTALLED AT THE END OF THE INLET PIPES INTO THE DETENTION POND. THIS WILL CAUSE THE SEDIMENT TO SETTLE MORE QUICKLY IN THE WET DETENTION POND, PROVIDING A CLEANER DISCHARGE, (SEE PLANS FOR SPECIFIC INSTALLATION LOCATIONS). 4 FOLLOWING THE USE OF THE FLOC LOG. THE SETTLED SEDIMENT WILL NEED TO BE REMOVED. THIS TEMPORARY SETTLING MEDIA REMOVED. OR THE

DETENTION POND MIGHT NEED TO BE CLEANED IF SEDIMENT SETTLING HAS SIGNIFICANTLY REDUCED THE POND VOLUME.

INSPECT AFTER STORM EVENTS TO CHECK FOR MOVEMENT OF MULCH OR FOR EROSION. IF WASHOUT, BREAKAGE, OR EROSION IS PRESENT IN THE SEDIMENT SETTLING MEDIA, REPAIR THE MEDIA. BE SURE THE FLOC LOG IS SECURE ATTACHED AT THE INSTALLED LOCATION, VERIFY THAT STORM WATER IS HAVING CONTACT WITH THE FLOC LOG.

FIBER ROLLS

TUBE SHAPED FIBER ROLLS FILLED WITH STRAW, FLAX, RICE, COCONUT FIBER MATERIAL, MULCH, OR COMPOSTED MATERIAL. EACH ROLL IS WRAPPED WITH UV-DEGRADABLE POLYPROPYLENE NETTING FOR LONGEVITY OR WITH 100 PERCENT BIODEGRADABLE MATERIALS LIKE BURLAP, JUTE, OR COIR.

INSTALL ROLLS PARALLEL WITH THE SLOPE CONTOUR, WITH THE ENDS SLIGHTLY LOWER THAN THE MID-SECTION, TO PREVENT WATER PONDING AT THE MID-SECTION. TURN THE ENDS SLIGHTLY UPSLOPE TO PREVENT WATER FROM BYPASSING THE EXCAVATE A TRENCH WITH A WIDTH AND DEPTH EQUAL TO ONE-FOURTH THE DIAMETER OF THE LOG. WHERE APPLICABLE INSTALL THE MEASURE UPSLOPE OF A CURB OR SIDEWALK. PLACING THE MEASURE AGAINST THE CURB WILL PROVIDE ADDITIONAL STABILITY AND RESISTANCE TO SURFACE FLOW. PLACE ROLLS END TO END TO FORM A CONTINUOUS BARRIER HARDWOOD STAKES SHALL BE DRIVEN THROUGH THE ROLLS, SPACED NO GREATER THAN 5' TO A DEPTH OF 18".

THE FIBER ROLLS SHOULD BE FASTENED TO THE HARDWOOD STAKES WITH ROPE. BACKFILL THE TRENCH WITH EXCAVATED SOIL TO GROUND LEVEL ON THE DOWN-SLOPE SIDE AND 2" ABOVE GROUND LEVEL ON THE UP-SLOPE SIDE OF

1. THE ROLLS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT. INSPECTION SHOULD INCLUDE IF THE MATERIAL'S DIAMETER IS LESS THAN SPECIFICATION AND IF THE OUTER NETTING HAS BEEN DEGRADED OR BROKEN. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-QUARTER OF THE HEIGHT OF THE ROLL. REPAIR ERODED AND DAMAGED AREAS. IF PONDING BECOMES EXCESSIVE, ROLLS SHOULD BE REMOVED AND EITHER RECONSTRUCTED OR NEW PRODUCT INSTALLED.

SEDIMENT BASINS/DETENTION PONDS DEPRESSIONAL AREAS CONSTRUCTED AT THE OUTFALL OF PIPES, END OF CHANNELS, OR END OF SURFACE SHEET FLOW, WHICH SERVES TO SETTLE OUT THE SUSPENDED SOLIDS.

1. AT LOCATIONS SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXCAVATE A SMALL BASIN. THE BASIN SIZE SHALL BE SHOWN ON THE PLANS AND IS DETERMINED BY THE VOLUME OF WATER TRIBUTARY TO THE BASIN. THE BASIN OVERFLOW ELEVATION SHALL BE LOWER THAN THE INCOMING WATER, BY A MINIMUM OF 12 INCHES. 2. THE BASIN SHALL BE LINED WITH A GEOTEXTILE FABRIC, 9" OF 4" RIPRAP SHALL BE PLACED ALL AROUND THE INSIDE OF THE BASIN.

THE BASINS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT. REPLACE AND RESTORE ANY BASIN BANK EROSION. REPAIR OR REPLACE ANY DISPLACED RIPRAP.

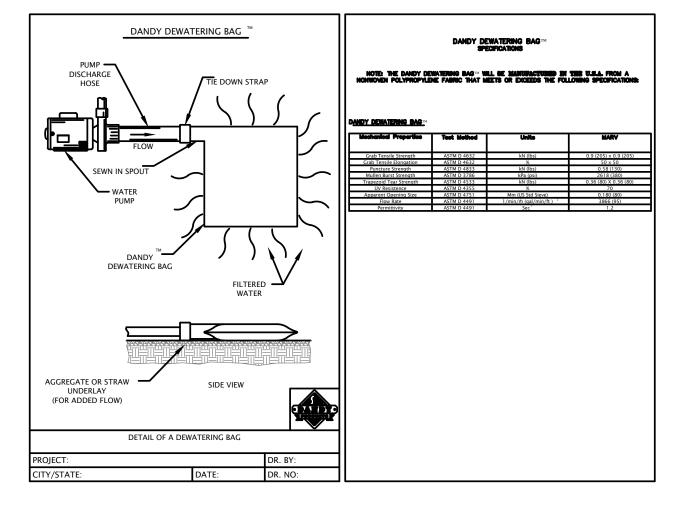
RE-EXCAVATE AND REPLACE THE BASIN WHEN IT BECOMES MORE THAN 50% FULL OF SEDIMENT.

DEWATERING BAGS

MATERIAL: "DANDY" DE-WATERING BAG OR "PUMP-IT" DE-WATERING BAG

INSTALLATION: INSTALL AT LOCATION OF THE DEWATERING PUMP OUTFALL. SIZE THE BAG T THE DISCHARGE RATE. THE MAXIMUM BAG SIZE MAY LIMIT THE DISCHARGE RATE OF THE PUMP. CONNECT BAG TO PUMP OUTFALL PER MANUFACTURER'S INSTRUCTIONS INSTALL BAG UPSTREAM OF THE RECEIVING STRUCTURE LOCATION. OUTLET TO GRASS AREA IF POSSIBLE

THE BASINS SHOULD BE INSPECTED PRIOR TO EACH USE. REPLACE BAG WHEN IT IS HALF FULL



INLET PROTECTION

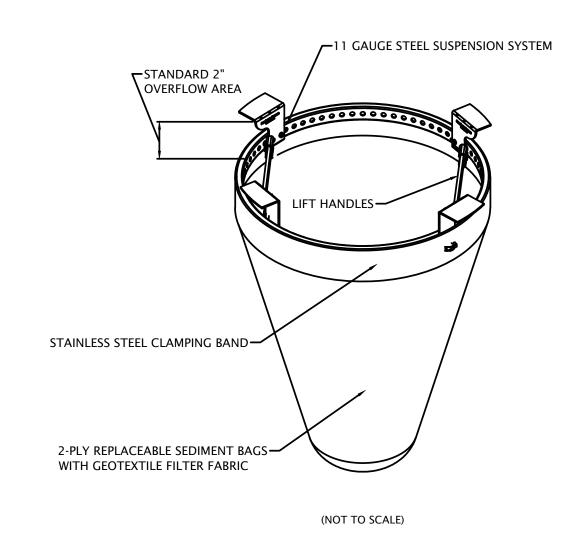
FLEXSTORM CATCH-IT BY ADS, INC. OR APPROVED EQUAL ADS CAN BE CONTACTED AT (866) 287-8655

CAPACITY:

Nominal Bag	Solids Storage	Filtered Flow Rate at 50% Max (CF)		
Size	(CaFt)	FX (Woven)	IL (NonWoven)	
Small	1.6	1.2	0.9	
Medium	2.1	1,7	1.3	
Large	3.8	2.7	1.9	
XL	4.2	3.6	2.6	

1. REMOVE GRATE; INSTALL PRIOR TO LAND DISTURBING ACTIVITIES AND/OR IMMEDIATELY AFTER DRAINAGE STRUCTURES HAVE BEEN

DROP INLET PROTECTION ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE. REPLACE GRATE.



INLET PROTECTION - CURB BASKET

DRAINAGE AREA:

AT CURB INLETS WHERE BARRIERS SURROUNDING THEM WOULD BE IMPRACTICAL OR UNSAFE LOCATION

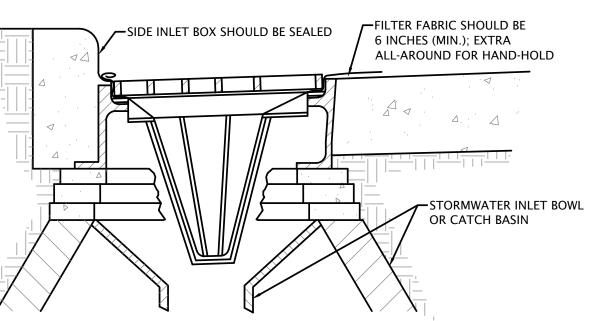
> D2 CATCH-ALL INLET PROTECTOR OR APPROVED EQUAL D2 LAND & WATER RESOURCE (WWW.D2LWR.COM OR 800-597-2180)

RUNOFF FROM A 2-YEAR FREQUENCY, 24-HOUR DURATION STORM EVENT ENTERING A STORM DRAIN WITHOUT BYPASS FLOW FABRICATED METAL WITH TOP WDITH/LENGTH DIMENSIONS SUCH THAT THE BASKET FITS INTO THE INLET WITHOUT GAPS GEOTEXTILE FABRIC: FOR FILTRATION

NSTALLATION

INSTALL BASKET CURB INLET PROTECTIONS AS SOON AS INLET BOXES ARE INSTALLED IN THE NEW DEVELOPMENT OR BEFORE LAND-DISTURBING **ACTIVITIES BEGIN IN A STABILIZED AREA** IF NECESSARY, ADAPT BASKET DIMENSIONS TO FIT INLET BOX DIMENSIONS, WHICH VARY ACCORDING TO THE MANUFACTURER AND/OR MODEL SFALTHE SIDE INLETS ON THOSE TYPES OF INLET BOXES THAT HAVE THEM. REMOVE THE GRATE AND PLACE THE BASKET IN THE INLET.

CUT AND INSTALL A PIECE OF FILTER FABRIC LARGE ENOUGH TO LINE THE INSDE OF THE BASKET AND EXTEND AT LEAST 6 INCHES BEYOND THE FRAM. REPLACE THE INLET GRATE, WHICH ALSO SERVES TO ANCHOR THE FABRIC.



INSPECT AFTER EACH STORM EVENT. REMOVE BUILT-UP SEDIMENT AND REPAIR (OR REPLACE IF NECESSARY) THE GEOTEXTILE FABRIC AFTER EACH STORM EVENT. PERIODICALLY REMOVE SEDIMENT AND TRACKED-ON SOIL FROM THE STREET (BUT NOT BY FLUSHING WITH WATER) TO REDUCE THE SEDIMENT LOAD ON

THIS CURB INLET PRACTICE. COMMON CONCERNS SEDIMENT NOT REMOVED AND GEOTEXTILE FABRIC NOT REPLACED FOLLWING A STORM EVENT RESULTS IN INCREASED SEDIMENT, TRACKING, TRAFFIC HAZARD, AND EXCESSIVE PONDING.

GEOTEXTILE FABRICE PERMITTIVITY THAT IS TOO LOW RESULTS IN RAPID CLOGGING AND CAUSES SEVERE PONDING WITH SEDIMENT ENTERING THE DRAIN IF THE FABRIC BREAKS DRAINAGE AREA TOO LARGE RESULTS IN SEDIMENT OVERLAOD AND SEVERE PONDING; SEDIMENT ENTERS THE DRAIN IF FABRIC BREAKS

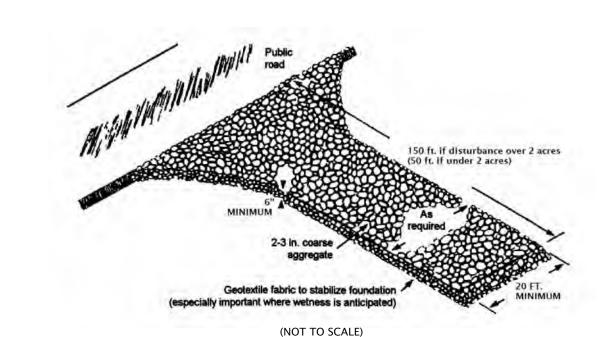
MAY BE USED UNDER WET CONDITIONS OR FOR SOILS WITHIN A HIGH SEASONAL WATER TABLE TO PROVIDE GREATER

TEMPORARY CONSTRUCTION ENTRANCE/EXIT PAD

2 TO 3 INCHES OF WASHED STONE (INDOT #2 AGGREGATE) OVER A STABLE FOUNDATION MATERIAL THICKNESS

20 FEET MINIMUM OR FULL WIDTH OF ENTRANCE/EXIT ROADWAY, WHICHEVER IS GREATER 150 FEET MINIMUM (50 FEET MINIMUM IF SITE DISTURBANCE IS UNDER 2.0 ACRES)

WASHING FACILITY: LEVEL AREA WITH 3 INCHES OF WASHED STONE (MINIMUM) OR A COMMERCIAL RACK AND WASTE WATER DIVERTED TO A SEDIMENT TRAP OR BASIN (PRACTICE 3.72)



INSTALLATION AVOID LOCATING ON STFEP SLOPES OR AT CURVES IN PUBLIC ROADS. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA, AND GRADE AND CROWN FOR POSITIVE DRAINAGE. IF SLOPE TOWARDS THE ROAD EXCEEDS 2%. CONSTRUCT A 6-8 IN. HIGH WATER BAR (RIDGE) WITH 3:1 SIDE SLOPES ACROSS THE FOUNDATION AREA

ABOUT 15 FT. FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE ROAD (PRACTICE 3.24) SEE EXHIBIT. INSTALL PIPE UNDER THE PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

PLACE STONE TO DIMENSIONS AND GRADE SHOWN IN THE EROSION/SEDIMENT CONTROL PLAN, LEAVING THE SURFACE SMOOTH AND SLOPED FOR DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.

INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER STORM EVENTS OR HEAVY USE.

RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL. TOP-DRESS WITH CLEAN STONE AS NEEDED. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED

IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.

A floating outlet (skimmer) is a dewatering device for temporary wet or dry sediment basins (708.02) and meets the requirement to withdraw from the surface of the water column (the least sedimentladen water).



Exhibit 708.03-A. Source: IDEM

 Floating outlets allow for water to be drained from the surface of the water column, ensuring the most turbid water to be retained longer which provides better sediment removal.

Floating outlets have better sediment removal efficiency than Perforated Riser Outlet (708.04)

or Rock Horseshoe (708.05) dewatering devices that do not withdraw water from the surface of the water column

- Limitations for Use: The SWP3 needs to provide alternative dewatering practices if the project anticipates using the floating outlet during freezing conditions. Measures that are not as impacted by freezing
- conditions are Perforated Riser Outlet (708.04) or Rock Horseshoe (708.05). Floating outlets are unlikely to be used from November 1st to March 1st due to the high potential for freezing conditions and alternative practices should be specified. The time periods may need to be adjusted according to the project location in the state.

Specifications:

Floating outlets can be implemented with the permanent basin outlet structure. In the event the permanent spillway does not have an appropriate outlet structure, then a temporary outlet structure/riser pipe will need to be installed/implemented to facilitate the use of a floating outlet.

Discharge Capacity: The floating outlet should meet requirements for Temporary Sediment Basins (708.02).

 $\underline{\underline{Dewatering\ zone\ volume}} = \underline{Required\ flow\ rate\ of\ skimmer}$ Dewatering time

Dewatering time

<u>Dewatering zone volume</u> = Required flow rate of floating outlet

Floating Outlet Considerations:

dewatering time.

- Pipe Size: Typical pipe sizes range from 1½ inches to 8 inches in diameter. Additional holes in
- the larger pipe allow more flow. Orifice Location: The orifice is best located near the floating perforated inlet area which will provide a constant head pressure to facilitate the calculation of the discharge rates and dewatering time. This location will also provide for a larger orifice diameter (larger orifices are less likely to clogging). The orifice can also be located in the outlet pipe. Head pressure will fluctuate as the basin dewaters and appropriate methodology is needed to calculate the
- In general, the larger the orifice holes the lower the clogging potential. Clogging with floatable debris is a significant concern of this device.
- Best to locate floating outlet devices where they can be easily accessed to facilitate maintenance activities and to be appropriately tethered or restrained to prevent flexible boom
- Floating boom must be able to freely rise to the maximum pool elevation without breakage. Floating boom guides/restraints: The flexible boom of a floating outlet requires restraints to prevent damage from kinking, twisting, breakage, or disconnection of the boom piping. The flexible connection is more prone to damage during cold weather when it can be more brittle and easier to crack or break.
- Side to side movement prevention: Restraints such as guide bars or rope tethers can prevent damaging side to side boom movements.
- o Back bending prevention: When there is a need to prevent back bending a landing device such as an aggregate pad, concrete block(s), gabion baskets (minimizes aggregate cleanup efforts) or fabricated props can be specified. This will prevent cracking or kinking damage to the flexible connection/hose. When guide bars are used a bottom elevation wire could be implemented in leu of a landing device pads or props. o Landing devices are needed prevent the floating inlet and boom from becoming trapped
- in sediment deposits or plugging of the inlet perforations. Dry or wet pool use considerations:
- o Dry pools: For pooling areas that are designed to completely dewater between run-off events the floating outlet shall be prevented from becoming entrapped in sediment deposits by implementing a landing device under the floating outlet to allow it to rest at the bottom of the dewatering zone elevation.
- Wet pools: Pooling areas that are designed to have a water filled sediment storage area typically do not require a landing device for the floating head. Implementing a landing device is recommended if a wet basin dries out to prevent back bending damage to the flexible boom connector. Angling floating boom direction towards shallow shoreline areas allows for implementation of a landing device versus pointing the boom out into deeper water areas.
- Freezing Conditions: If ice formation is a concern install boom and inlet at an incline to maintain positive drainage through the device to minimize clogging from ice formation. Temporary landing pads can be used to keep the boom at an incline (not flat) to maintain positive drainage. Prop materials should not inhibit sediment clean out activities and reuse of the materials should be considered in the installation.

Typically, 2 years or less. Floating outlets are reusable if site conditions are right, are not damaged, and without signs of deterioration/weathering.

If using a propriety product follow/see the product required material list or if using the contractor assembled device see exhibit 708.03-E.

Typical Installation:

- For proprietary manufactured devices follow the manufacturer's recommended installation specifications for the specific floating outlet dewatering device being implemented. All floating outlet device joints or connection shall be securely fastened, watertight or glued where required according to the manufacture's requirements. Install the flexible boom with watertight connections to the basin principal outlet structure depending upon the type of designed basin discharge outlet.
- When connecting to a permanent basin outlet structure the height may need to be modified and any additional unused orifice holes will require a temporary watertight
- When the use of the Perforated Riser Outlet (708.04) or Rock Horseshoe (708.05) is anticipated due to land disturbing activities that will not be completed prior to winter weather then install the alternative dewatering device with basin construction but keep it offline until onset of potential freezing time periods
- Floating outlets are recommended to be restrained to prevent damage from excessive side to side movement that can result in kinking, twisting, cracking breaking or disconnection of the flexible boom connector. Restraint methods such as ropes tied to the floating head anchored to posts on shore or on basin floor or guide bars located along either side of the rigid boom piping to limit side to side movement. When using rope restraints maintain appropriate tension and use ropes that float to prevent ropes from being covered or buried by sediment
- When plans specify more than one floating outlet device install and restrain such that the
- floating boom structures do not drift into the other's boom float reach. Dry Basin Landing device: Provide a landing device such as an aggregate pad, concrete block(s), gabion baskets (minimizes aggregate cleanup efforts) or fabricated props or other suitable material that will allow the floating outlet to rest at the bottom of the dewatering zone elevation. The landing device is required to keep the floating outlet above sediment deposits and to protect the boom from back bending. For use during potential freezing conditions the top elevation of the landing device shall be slightly higher than the invert of the riser connection to allow for complete device draining to prevent damage from freezing.

Typical Maintenance

- The floating inlet is designed to drain the dewatering zone in no less than 48 hours and no longer than 72 hours for the minimum required storage volume. If the floating inlet is not
- performing as required (too fast or too slow) the orifice size and/or inlet hole size or number shall be modified to achieve the design goal/requirement
- For proprietary manufactured devices follow the manufacturer's recommended maintenance requirements for the specific floating outlet implemented. Floating outlets shall be inspected at a minimum weekly, prior to anticipated rain events, and
- malfunction can result in basin failures and/or excessive sediment discharges. If flow is restricted, then inspect device for debris clogging and remove any obstructions. • Where tethered by rope: If basin is not draining properly sometimes a tug on the rope tether will cause the inlet to bob up and down to dislodge clogging debris and restore inflow. Avoid violent yanking on the rope or pulling with machinery to prevent damage to the inlet unit and

within 24 hours after each run-off event. Floating outlets require vigilant maintenance since

- the flexible connector. Floating inlet areas can frequently clog. Ensure that the head is level with water surface. Where
- excessive floating debris is a concern implement Basin Baffles (708.06) that extend above the pooling elevation to trap floatable debris away from inlet zone.
- Ensure that the floating outlet cannot be stuck in sediment deposits and can freely float with
- Excessive back bending of flexible boom: Install support pads or props to prevent boom from back bending lower than the dewatering design elevation. Where guide bars are implemented a, cross wire can be located at the required landing elevation
- Sediment removal is required when deposits impact proper function of the dewatering device.
- The landing device elevation must be maintained above the level of sediment deposition. If rapid basin sediment buildup occurs near the device boom, implement baffles to trap
- sediment further away from the device refer to Basin Baffles (708.06). If unit does not float check to see that the inlet head, barrel/boom, or ropes are free from sediment deposits or plant growths. Clear sediment, debris, and plants away from device. Also
- check floating section or floatation devices for sufficient buoyancy and/or for cracking/leaks. Check to ensure that the head components, piping, pipe connections and flexible connector are free of cracks, leaks, and deteriorations
- Freezing conditions can result in clogging of the inlet and boom. Avoid use of this practice during prolonged cold weather periods. If ice formation is a concern maintain landing device elevation to result in an incline to maintain positive drainage through the device to minimize clogging from ice formation.

area has been properly stabilized and no longer contributing sediment-laden run-off or when

- If vandalism is a problem, more frequent inspection may be necessary.
- Make needed repairs immediately. Removal: The floating outlet practice shall only be removed when the contributing drainage
- freezing conditions are anticipated. When permanent stormwater basins have been modified to function as a temporary sediment basin and the contributing watershed has been permanently stabilized, remove sediment from the pooling area to meet the basin design requirements, remove all temporary dewatering devices, or features and make functional all required permanent outlet features



of a storm water pasin for sediment control during the construction phase of this project. The po construction outlet orifices have been temporarily plugged for the construction phase. Below the floating outlet is a shallow pit that allows the basin to completely dewater such that a landing device was not implemented. Implementing a landing device minimizes the potential for floating inlet and boom becoming trapped/impacted by sediment deposits. Source: IDEM



Source: IDEM

Exhibit 708.03-C. A floating outlet is becoming trapped in sediment deposits since a landing device was not implemented. Also, the restraint rope has become entrapped in sediment deposits that will likely not allow the inlet to float. Restrain ropes need to be tight enough to prevent drooping into sediment.

CONSTRUCTION OF THE CONTRACTOR ASSEMBLED FLOATING OUTLET

Construction Notes (see Exhibits 708.03-F and G):

- (1) Flotation section shall be solvent welded to ensure an airtight assembly. Contractor to conduct a test to check for leaks prior to installation. Attaching the perforated outlet pipe to the floatation section will be done in a manner that will not compromise the airtight qualities of the
- floatation section. (2) The attachment bands between the floatation section and the perforated inlet section must allow movement to ensure the floatation section can remain level with the water surface for
- proper inlet function and to minimize clogging from floating debris. (3) Perforated inlet section shall have adequate opening such as 12 rows of ½ inch diameter holes, 1¼ inch on center. To achieve this spacing each row of holes should be offset from the row above and below.
- (4) Boom length: 4-foot-long minimum or by design however longer booms result in less bending damage or wear to the flexible boom connector. (5) Flexible pipe: Corrugated non perforated plastic tubing or flexible rubber hose. Secure
- watertight connectors are required from the discharge outlet to the boom piping. (6) Orifice: Install orifice as shown in construction drawings.

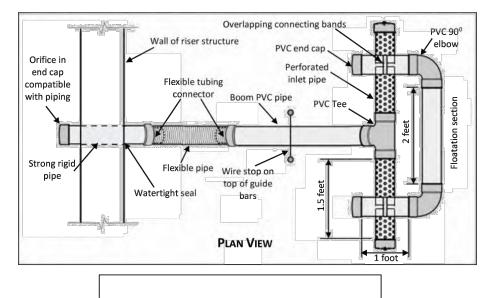
Typical materials to construct a four (4) inch floating dewatering device (see Exhibits 708.03-E and F).

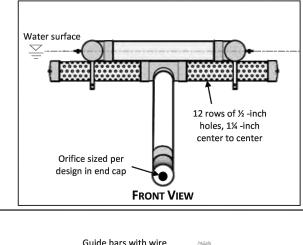
Pipe size will be based upon plan requirements. Solid pipe (boom) - 4-inch Schedule 40 PVC. Boom length – as shown on the construction drawings.

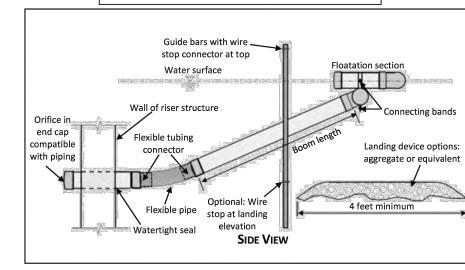
Perforated pipe (inlet) - 4-inch Schedule 40 PVC (drilled holes or manufactured perforated pipe

- according to design or meets design requirements) (Minimum of 12 rows of ½ inch diameter holes. 1¼ inch center to center).
- 90° Tee (1 ea.) 4-inch Schedule 40 PVC. 90° Elbow (2 ea.) - 4-inch Schedule 40 PVC
- Cap (4 ea.) (for floating head) 4-inch Schedule 40 PVC. Flexible pipe - 4-inch corrugated plastic tubing (non-perforated) or heavy-duty flexible hose. Orifice: Orifice location and opening size as show on construction drawings.
- Pipe to corrugated tubing fittings (2 ea.) Corrugated plastic tubing connection adapter is recommended to connect the tubing to the Schedule 40 PVC boom and a connector compatible to the riser pipe connection. Corrugated connector must provide a strong watertight connection that is not prone to disconnection.
- Attachment bands Attachment bands that connect the floatation section to perforated inlet piping shall be one (1) inch steel strapping or equivalent.
- Guide bars or posts: Rebar or T fence posts of sufficient length to accommodate anticipated boom height movement. Wire stop is required at the top of the guide bars for guide bar
- Landing device options: Aggregate pad, concrete block(s), gabion baskets, attach a bottom wire stop to guide bars, or other immovable object/material that allows it to rest at the desired

Source: Adapted from Delaware Erosion and Sediment Control Handbook: Skimmer Dewatering Device DE-ESC-3.2.3.1 Feb 2019.







FLOATING OUTLET DEWATERING DEVICE PRACTICE SPECIFICATIONS TABLE

asin No.	Emergency Spillway Flow Depth Elevation (ft.)	Flexible Hose/Tubing Attachment Elevation (ft)	Boom Length* (ft.)	Boom Diameter (in.)	Orifice Size** (in.)	7 Top of Landing Device Elevation (ft.)	Flexible Hose/Tubing Length (ft.)
1	694.0	690.0	4'	8"	6"	691.0	8'
2	693.0	689.0	4'	6"	4"	690.0	8'
3	694.0	690.0	4'	6"	3"	691.0	8'
* Mir	imum Boom Length = (levation Column	2 – Elevatio	n Column 3) x	1.414 (fo	45-degree angle)	
** M	ust be equal to or less th	nan boom diamete	er.				

MATERIAL MANAGEMENT MEASURES (HOUSEKEEPING) **CONCRETE WASHOUT**

MINIMUM OF TEN MIL POLYETHYLENE SHEETING, FREE OF HOLES, TEARS, AND OTHER DEFECTS

ORANGE SAFETY FENCING OR EQUIVALENT METAL PINS OR STAPLES SIX INCHES IN LENGTH MINIMUM.

1. LOCATE CONCRETE WASHOUT SYSTEMS AT LEAST 50 FEET FROM ANY CREEKS, WETLANDS, DITCHES, KARST FEATURES, OR STORM DRAINS/MANMADE

ADJACENT LAND AREAS

2. LOCATE CONCRETE WASHOUT SYSTEMS IN RELATIVELY FLAT AREAS THAT HAVE ESTABLISHED VEGETATIVE COVER AND DO NOT RECEIVE RUNOFF FROM 3. LOCATE AWAY FROM OTHER CONSTRUCTION TRAFFIC IN AREAS THAT PROVIDE EASY ACCESS FOR CONCRETE TRUCKS.

1. A BASE SHALL BE CONSTRUCTED AND PREPARED THAT IS FREE OF ROCKS AND OTHER DEBRIS THAT MAY CAUSE TEARS OR PUNCTURES IN THE POLYETHYLENE 2. 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 3. PLACE FLAGS, SAFETY FENCING, OR EQUIVALENT TO PROVIDE A BARRIER TO CONSTRUCTION EQUIPMENT AND OTHER TRAFFIC. INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS.

MAINTENANCE INSPECT DAILY AND AFTER EACH STORM EVENT.

INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT

4. WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD.

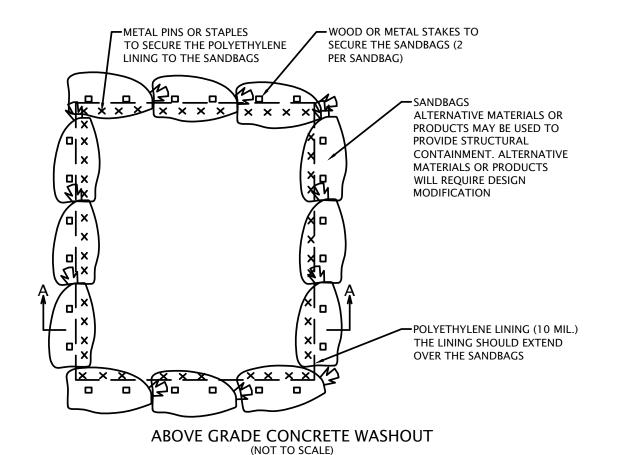
INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL EXCESS CONCRETE SHOULD BE REMOVED WHEN THE WASHOUT SYSTEM REACHES 50 PERCENT OF THE DESIGN CAPACITY. USE OF THE SYSTEM SHOULD BE DISCONTINUED UNTIL APPROPRIATE MEASURES CAN BE INITIATED TO CLEAN THE STRUCTURE 6 LIPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE, REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM

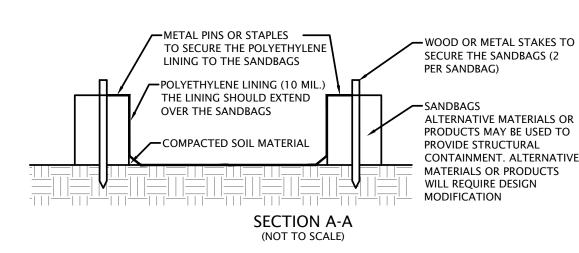
DISPOSE OF ALL CONCRETE IN A LEGAL MANNER. REUSE THE MATERIAL ON SITE, RECYCLE, OR HAUL THE MATERIAL TO AN APPROVED CONSTRUCTION/DEMOLITION LANDFILL SITE. RECYCLING OF MATERIAL IS ENCOURAGED. THE WASTE MATERIAL CAN BE USED FOR MULTIPLE APPLICATIONS INCLUDING BUT NOT LIMITED TO ROADBEDS AND BUILDING. THE AVAILABILITY FOR RECYCLING SHOULD BE CHECKED LOCALLY THE PLASTIC LINER SHOULD BE REPLACED AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING. THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE.

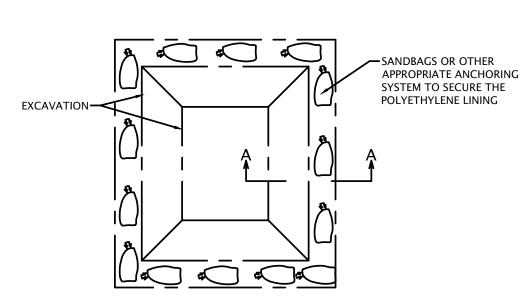
8. CONCRETE WASHOUT SYSTEMS ARE DESIGNED TO PROMOTE EVAPORATION. HOWEVER, IF THE LIQUIDS DO NOT EVAPORATE AND THE SYSTEM IS NEAR APACITY IT MAY BE NECESSARY TO VACUUM OR REMOVE THE LIQUIDS AND DISPOSE OF THEM IN AN ACCEPTABLE METHOD. DISPOSAL MAY BE ALLOWED AT THE LOCAL SANITARY SEWER AUTHORITY PROVIDED 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. INSPECT CONSTRUCTION ACTIVITIES ON A REGULAR BASIS TO ENSURE SUPPLIERS, CONTRACTORS, AND OTHERS ARE UTILIZING DESIGNATED WASHOUT

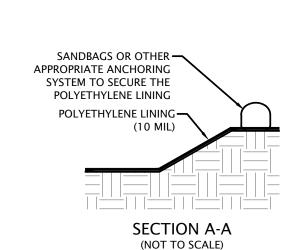
AREAS. IF CONCRETE WASTE IS BEING DISPOSED OF IMPROPERLY, IDENTIFY THE VIOLATORS AND TAKE APPROPRIATE ACTION. 10. WHEN CONCRETE WASHOUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASHOUT SYSTEMS SHALL BE CLOSED. DISPOSE OF ALL HARDENED CONCRETE AND OTHER MATERIALS USED TO CONSTRUCT THE SYSTEM

11. HOLES, DEPRESSIONS, AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND STABILIZED.









BELOW GRADE CONCRETE WASHOUT

(NOT TO SCALE)

- COMPLETE CONSTRUCTION/INSTALLATION OF THE SYSTEM AND HAVE WASHOUT LOCATIONS OPERATIONAL PRIOR TO CONCRETE DELIVERY IT IS RECOMMENDED THAT WASHOUT SYSTEMS BE RESTRICTED TO WASHING CONCRETE FROM MIXER AND PUMP TRUCKS AND NOT USED TO DISPOSE OF EXCESS CONCRETE OR RESIDUAL LOADS DUE TO POTENTIAL TO EXCEED THE DESIGN CAPACITY OF THE WASHOUT SYSTEM 3. INSTALL SYSTEMS AT STRATEGIC LOCATIONS THAT ARE CONVENIENT AND IN CLOSE PROXIMITY TO WORK AREAS AND IN SUFFICIENT NUMBER TO
- ACCOMMODATE THE DEMAND FOR DISPOSAL 4. INSTALL SIGNAGE IDENTIFYING THE LOCATION OF CONCRETE WASHOUT SYSTEMS.

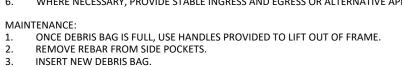
FRYEFLOW FILTRATION SYSTEMS WASHOUT

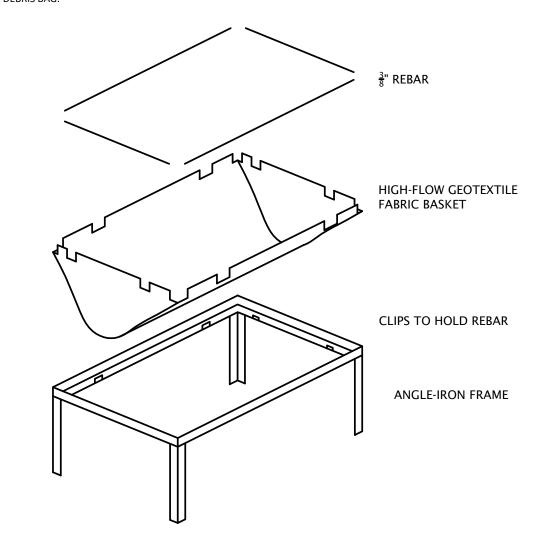
MATERIALS: FRYE-FLOW FILTRATION SYSTEMS CONCRETE WASHOUT DEVICE OR APPROVED EQUAL

INSTALLATION: INSERT REBAR INTO POCKETS OF DEBRIS BAG.

INSTALL FRYEFLOW SYSTEMS DEBRIS BAG INTO ANGLE IRON FRAME. MAKE SURE REBAR SETS BEHIND REBAR BRACKETS. MAKE SURE FRAME AND BAG IS SET ON FLAT SURFACE

INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD. MAINTENANCE:





SPILL PREVENTION AND CONTROL PLAN

ONLY APPROVED FUEL STORAGE TANK SHALL BE ALLOWED ON SITE. SPILL KITS MUST BE LOCATED ON-SITE IN THE VICINITY OF THE FUEL STORAGE SINK.

MOBILE FUELING SHALL BE USED WHENEVER POSSIBLE. FUELING SHOULD TAKE PLACE IN A CENTRAL LOCATION.

5. EQUIPMENT SHOULD BE KEPT IN GOOD WORKING ORDER, WELL MAINTAINED SO THAT BREAKDOWNS, AND EQUIPMENT FAILURES ARE

FUEL STORAGE

5. FUEL TANKS SHALL HAVE A SAFETY GAUGE.

1. ALL FUEL TANKS ON SITE SHALL HAVE SECONDARY CONTAINMENT APPROVED BY IDEM. NO FUEL TANKS ARE TO BE LOCATED WITHIN 100 FEET OF A STORM SEWER INLET. FUEL STORAGE SYSTEM SHALL BE KEPT IN GOOD WORKING ORDER AND SHALL BE SUBJECT TO PERIODIC IDEM INSPECTIONS. 4. SPILL KITS MUST BE LOCATED ON-SITE IN THE VICINITY OF THE FUEL STORAGE SINK.

STOCKPILES

1. THE CONTRACTOR SHALL LOCATE TOPSOIL STOCKPILES ON-SITE AS NOTED ON THE S.W.P.P.P. AND SHALL ENCOMPASS EACH WITH SEDIMENT DITCH AND SILT FENCE.

IN CASES WHERE THE STOCKPILE IS SMALL AND WILL BE REMOVED FROM THE SITE WITHIN 15 DAYS, THE CONTRACTOR CAN COVER THE STOCKPILE WITH A WATERPROOF TARPAULINE TYPE COVER. 3. NO OFF-SITE STOCKPILES ARE BEING PROPOSED. ANY OFF-SITE STOCKPILES THAT THE CONTRACTOR UTILIZES SHALL FOLLOW THE SAME

REQUIREMENTS AS ON-SITE STOCKPILES. THE CONTRACTOR SHALL IDENTIFY TO THE LOCAL S.W.P.P.P. ENFORCEMENT AGENCY THE LOCATIONS OF ANY OFF-SITE STOCKPILES.

TEMPORARY FACILITIES

1. THE CONTRACTOR SHALL FOLLOW THE PROCEDURES DELINEATED ON THE PLAN IN ORDER TO CONSTRUCT AND MAINTAIN THE FACILITIES SHOWN ON THE DRAWINGS TO CONTROL WATER AND WIND EROSION DURING CONSTRUCTION OF THE PROJECT. ALL DISTURBED SURFACE AREAS (INCLUDING UTILITY TRENCHES) SHALL BE TEMPORARILY GRADED AND/OR DITCHED TO DIRECT WATER RUNOFF FROM SUCH AREAS TO SEDIMENTATION CONTROL DEVICES WHICH WILL PREVENT DISTURBING ERODED WATER CARRYING SOIL FROM ENTERING A WATERCOURSE, SEWER, OR ADJACENT LANDS. SUCH SEDIMENTATION CONTROL DEVICES SHALL INCLUDE BUT NOT BE LIMITED TO PROTECTIVE DITCHES, SEDIMENT TRAPS, SEDIMENT FILTERS, DITCH TRAPS, PIPE BARRIERS, SIKE DIKES, CHECK DAMS,

CHEMICAL SETTLING FILTERS. 3. UPON COMPLETION OF THE ROUGH GRADING ALL AREAS NOT EFFECTED BY CONSTRUCTION TRAFFIC SHALL BE PERMANENTLY SEEDED, AND EROSION CONTROL BLANKETS INSTALLED ON SIDE SLOPES THAT EXCEED 5:1.

4. UPON COMPLETION OF THE STORM SEWER SYSTEM, INLET PROTECTION SHALL BE INSTALLED, CHECK DAMS INSTALLED IN THE SWALES, AND TEMPORARY RIPRAP WITH SETTLING BASINS PLACED AT THE OUTFALLS OF ALL PIPE. IN ROADWAY AREAS TEMPORARY AGGREGATE SURFACING SHALL BE PLACED IMMEDIATELY AFTER THE BACKFILLING HAS BEEN COMPLETED. POSITIVE DUST CONTROL MEASURES SHALL BE TAKEN AT ALL TIMES. WITHIN 14 DAYS FROM THE DATE A PROJECT IMPROVEMENT IS INSTALLED THE CONTRACTOR SHALL PROCEED WITH FINAL CLEANUP AND RESTORATION OF THE PROJECT AREA DISTURBED INCLUDING SPOIL AREAS, AND COMPLETE SUCH OPERATIONS WITHIN THE NEXT 15 DAYS. IF SEASONAL CONDITIONS PREVENT FINAL CLEANING AND RESTORATION, THE CONTRACTOR SHALL PROCEED WITH TEMPORARY

STABILIZATION OF THE DISTURBED AREAS. FINAL CLEANUP AND RESTORATION WILL CONSIST OF FINAL GRADING, APPLYING TOPSOIL, SEEDING AND MULCHING AND/OR SODDING OF ALL DISTURBED AREAS OF THE PROJECT. TEMPORARY STABILIZATION SHALL CONSIST OF ROUGH GRADING THE DISTURBED AREAS TO A CONDITION READY TO RECEIVE TOPSOIL. SEEDING, AND MULCHING IN ACCORDANCE WITH THE TEMPORARY SEEDING SCHEDULE. TEMPORARY STABILIZATION MATERIALS SHALL BE REMOVED, DISPOSED OF, AND FINAL CLEANUP AND RESTORATION SHALL BE COMPLETED NOT LATER THAN 60 DAYS AFTER SEASONAL CONDITIONS ALLOW PERFORMANCE OF THE REQUIRED WORK. THE CONTRACTOR SHALL LOCATE TOPSOIL STOCKPILES ON-SITE AS NOTED ON THE S.W.P.P.P. AND SHALL ENCOMPASS EACH WITH SEDIMENT DITCH AND SILT FENCE. IN CASES WHERE THE STOCKPILE IS SMALL AND WILL BE REMOVED FROM THE SITE WITHIN 15 DAYS, THE CONTRACTOR CAN COVER THE STOCKPILE WITH A WATERPROOF TARPAULINE TYPE COVER. NO OFF-SITE STOCKPILES ARE BEING PROPOSED. ANY OFF-SITE STOCKPILES THAT THE CONTRACTOR UTILIZES SHALL FOLLOW THE SAME REQUIREMENTS AS ON-SITE STOCKPILES. THE CONTRACTOR SHALL IDENTIFY TO THE LOCAL S.W.P.P.P. ENFORCEMENT AGENCY THE LOCATIONS OF ANY OFF-SITE STOCKPILES.

MATERIAL HANDLING AND STORAGE

THE CONTRACTOR SHALL MINIMIZE THE DISTURBANCE OF EXCAVATED SOILS BY MINIMIZING THE NUMBER OF TIMES THE SOIL IS HANDLED. ON-SITE HANDLING OF SOILS WILL OCCUR DURING EXCAVATION, LOADING, AND SPREADING ACTIVITIES. FUEL FOR HEAVY EQUIPMENT AND VEHICLES WILL NOT BE STORED ON THE SITE DURING CONSTRUCTION OPERATIONS. MOBILE FUEL TANKS WILL FUEL HEAVY EQUIPMENT. IN THE EVENT OF A SPILL OR LEAK THE CONTRACTOR SHALL FOLLOW PROPER PROCEDURES TO MINIMIZE CONCERN. THE CONTRACTOR SHALL:

TAKE IMMEDIATE MEASURES TO CONTROL AND CONTAIN THE SPILL TO PREVENT RELEASE INTO SEWERS OR SURFACE WATERS. NOTIFY THE LOCAL FIRE DEPARTMENT IMMEDIATELY AT 9-1-1.

NOTIFY THE FEDERAL EMERGENCY SPILL HOTLINE AT 1-800-424-8802 WITHIN 2 HOURS IF THE AMOUNT IS ABOVE A REPORTABLE QUANTITY OR ANY AMOUNT ENTERS A WATERWAY OR STORM SEWER.

NOTIFY THE INDIANA EMERGENCY RESPONSE HOTLINE AT 1-888-233-7745. FOLLOW THE GUIDELINES FOR HANDLING THE SPILL AS OUTLINED IN THE INCLUDED MATERIAL SAFETY DATA SHEETS.

1155 Troutwine Road Crown Point, IN 46307 219.662.7710 fax 219.662.2740 www.dvgteam.com



NIPSCO New Paris Local Operations Center Elkhart County, IN New Paris, IN

DPUD Project Report

May 30, 2025 June 27, 2025

Prepared for:

NIPSCO 801 E. 86th Avenue Merrillville, IN 46410

Prepared by:

DVG Team, Inc. 1155 Troutwine Rd. Crown Point, IN 46307



Table of Contents

- 1.0 Project Description and Overview
- 2.0 Project Development Details
- 3.0 Elkhart County Development Ordinance
- 4.0 Deviations
- 5.0 Water and Sanitary Sewer Systems
- 6.0 Traffic
- 7.0 Storm Water
- 8.0 Environmental Assessments

Exhibits

- 1. Legal Description
- 2. Location Map
- 3. Site Location Aerial
- 4. FEMA FIRM Map
- 5. NRCS Soil Maps
- 6. NIPSCO Hourly Access Report



1.0 Project Description and Overview

The purpose of this project is to develop the proposed site into a regional service location, also known as a Local Operating Area (LOA), for the Northern Indiana Public Service Company (NIPSCO). NIPSCO provides gas and electric utility services to the surrounding communities. To support this service, a centrally located field office with access to major thoroughfares is necessary to facilitate a timely and efficient response.

The LOA will accommodate a maximum of 200 employees who will begin their workday at the main office building. Approximately 50% of these employees will remain on-site in office engineering, technical services, or support roles, while the other half will deploy to various worksites to conduct repairs or installations for either the electrical or gas service divisions.

This site was chosen for its proximity to the existing service location, which is on a landlocked parcel and no longer sufficient to meet the growing needs of the community. The new site is slightly farther south, providing improved accessibility to Kosciusko County and convenient access to State Road 15, a major regional thoroughfare.

2.0 Project Development Details

The site spans approximately 50 acres on the west side of SR 15, between C.R. 142 and C.R. 121 (29). It is currently an agricultural field but has been master-planned for business zoning. The north side of the site will include a gated employee parking lot, a main office building, and an attached warehouse.

Various service vehicles will be located on-site, ranging from small SUVs to large trucks with high-reach booms, as well as trailers and equipment. Some vehicles will be housed in heated garages; most will be staged outside. Outdoor-staged vehicles will include features like block heaters to ensure readiness during emergency events. Initially, vehicle storage barns of approximately 56,000 square feet will be constructed, with capacity for future expansion as service needs grow. The site can support up to 150,000 square feet of detached indoor storage.

The site has been designed to accommodate the safe maneuvering of service and delivery vehicles. Traffic flow is carefully planned to prevent overlap between the electric and gas divisions, particularly near loading zones. Behind the main building and garages lies the yard area, which includes outdoor storage for materials staged on concrete pads or in



temporary areas. Materials such as pipes, wire spools, transformers, poles, stone, and sand—used in permanent installations—will be stored outdoors. Bulk deliveries will be processed on-site, generating the need for dumpsters and waste containment areas. A large pole storage area will be included, capable of handling poles from 30 to 100 feet in length.

The project will be built as a single phase, with construction slated to commence January 2026, with a completion/operational date of September 2027. There are future buildings and uses outlined in this document that are for purposes of zoning approval. The required building permits and approvals will be sought for those improvements when they become actual.

Fleet Garage and South Yard

A fleet service building will be constructed on the south side of the site, featuring a fleet garage and onsite mechanics to maintain the extensive vehicle fleet. Parking areas around the garage will accommodate staff and serve as a daily staging area. This area will not typically house long-term inoperable vehicles. This building will also serve as a substation maintenance office. Substation maintenance is a separate workflow from the customer service line installation and maintenance. A future area is planned around the fleet garage for additional expansion of the facility staff and for temporary contractor use.

Access to the Site

Employee access to the site will be through the existing Fernbrook Road to the south. The platted cul-de-sac which has not yet been constructed will be constructed, and a private driveway with a gated entrance will extend north into the site. This location for access provides a safe location for staff to gain keycard access to the site, while not impacting on the higher traffic volume roadways of CR142 and SR15. The cul-de-sac provides for a safe turn around location for those mistakenly attempting to access the site. The service vehicles will have ingress and egress access to the site at the SW corner of the site along CR 142. This entrance will also be gated further into the site, so that vehicle stacking will be located on the entrance drive. The project will provide traffic improvements along CR 14 as the traffic study recommends. A traffic study is being prepared to demonstrate the warrants of any proposed improvements. Included in Exhibit 5 is an hourly access study which demonstrates that at peak the hourly access of service vehicles in or out of the site is 12.22. This report also demonstrates the employee peak access to be during morning



arrival times at 17.64 vehicles. These are relatively minor traffic volumes, and we anticipate pavement widening particularly to provide a dedicated right turn lane into the service vehicle driveway. It is our understanding from various conversations with INDOT that access along SR15 is discouraged primarily due to the higher posted speed.

The site plan provides for two emergency access locations on to CR 121 on the north side. These entrances will be gated closed and are provided for emergency and public safety access to the site.

Parking / Outdoor Storage

Employee parking will be located in front of the main office building. A dedicated driveway will provide access to the parking lot from the Fernbrook entrance. The proposed parking lot will provide approximately 165 employee parking spaces. This parking lot and the site storm water system are designed to be expanded to 250 parking spaces. The parking lot is an asphalt paved parking lot with a minimum of 1.00% surface grades, and a storm sewer system. The parking lot is located 50' from the right of way dedication of SR15. The parking lot is fenced and gated for security. A three- to four-foot-high berm is proposed between SR15, and buffer yards are provided around the perimeter of the site.

Service Vehicle parking will be provided in asphalt paved parking areas around the main office building. The parking areas are designed to accommodate the various numbers and types of vehicles as required by NIPSCO.

Outdoor Storage / Trailer Parking will be in various locations on the site. These will be gravel surfaces with storm drainage structures and storm sewers.

A minimum of a 25' property line setback has been provided for all parking and outdoor storage areas. The residential parcel surrounded by this parcel will have screening berms placed between the parcel and the proposed uses at the site. To the west this berm is proposed to be a minimum of 9ft in height. All outdoor areas of the site will include lighting, as occasionally during service outages, the restoration effort extends throughout the day and night. The site lighting will be dark-sky compliant fixtures, a photometric plan will be provided demonstrating that there is less than 0.5 lumen light trespass at the property lines, exclusive of the berms providing light cutoff. The fixtures will be controlled LED fixtures, and shields provided as required by the photometric plan. All areas of the site will be monitored by CCTV.



Proposed parking spaces exceed the required 9'x20' (10'x20' for employee vehicles) and 14'x30' for service vehicles. All drive aisles are a minimum of 25'.

Signage

A proposed monument sign is located along CR142 at the intersection of Fernbrook Road and CR141. There will be a sign mounted on the front face of the main office building. There will be signage both designating the property at the south employee and service vehicle entrances. There will be various warning and wayfinding signage surrounding and within the site.

Employee parking will be located in front of the main office building. A dedicated driveway will provide access to the parking lot from the Fernbrook entrance.

Additional Site Features (Future)

1. Communication Infrastructure:

NIPSCO uses secure communication systems, including towers. Due to proximity to the airport, tower height will be limited and subject to FAA approval. Up to five towers may be installed.

2. Alternative Energy Integration:

The site may include solar panels (up to 50,000 square feet), either ground- or building-mounted. Wind or other emerging technologies may be tested on-site for demonstration purposes. Battery storage systems may also be included.

3. Storm Response Staging:

In the event of a major regional storm, the site will serve as a central staging area for emergency response. Equipment and staffing levels may temporarily increase, and the site will support overflow parking, storage trailers, and conex boxes until service is restored.

4. Other NIPSCO Operations:

Beyond maintenance, the site may support other NIPSCO operational activities such as substation management. Up to five additional structures, not exceeding 50,000 square feet each, may be constructed for these functions.



3.0 Elkhart County Development Ordinance

The project is seeking a zone change to the DPUD classification in the Elkhart County Development Ordinance (ECDO), following an underlying zoning of B3, which provides for Utilities, Major uses as defined in the EDCO.

Setbacks - The building front yard setbacks of 55' for a nonresidential use from the centerline of a numbered county road and 120' for a state highway have been followed. The side and rear setbacks meet the ECDO.

Buffers - The parking areas conform to the 25' setback. A class 2 buffer is required between the adjacent R1 parcels. A class 1 buffer is required between the adjacent B1 parcel. There are no buffer yard requirements to the agricultural land to the west. The project proposes several buffer yard types. These are listed below and are shown graphically on sheet C108 of the plan set. Any deviations are listed in 4.0 Deviations.

A 6' tall security fence will be installed around the perimeter of the site. Sightlines thru and along the fence must be maintained. The fence will be located a minimum of 10' from the property line and a 10' clear zone will be located on both sides of the fence line. There will not be any plantings other than turf grass in this clear zone. The security fence is not included in consideration of the required buffers.

West Line – There are no buffer required along the agricultural land. A 20ft enhanced field border strip will be placed along the west line, prior to the 20' fence clear zone.

North Line - Class 2, Type B 15' Buffer Zone with 3 trees and 9 shrubs per 100ft, with an opaque fence. The entire 1000LF of frontage will be used to calculate the tree and shrub requirements, these plantings will be clustered at the NE corner of the site as shown on sheet C108. There will not be any opaque material added to the fence.

East line – There are no buffers required along S.R.15. The fence clear zone will be outside the S.R. 15 ROW. Inside the fence clear zone there will be a landscape berm. On the S.R.15 frontage along the area of the Office/Warehouse Building and related accessory buildings, the area will be planted with turf grass. The frontage along the Fleet Building will be planted partially with enhanced field border plantings and will include trees on the berm that is lower than 3 feet in height.



Adjacent Residential (Chupp)

South Line (adjacent to the special exception business use structure) – The 20' fence clear zone will be a part of the 25' buffer zone. The required Class 2, Type A buffer zone trees and shrubs will be planted interior of the fence line as shown on sheet C108.

East Line - The 20' fence clear zone will be a part of the provided 75' buffer zone. The required Class 2, Type A buffer zone trees and shrubs will be replaced with a berm with a height of 9ft planted with native plantings.

North Line (adjacent to the residential structure) – The 20' fence clear zone will be a part of the provided 60' buffer zone. The required Class 2, Type A buffer zone trees and will be planted interior of the fence line on top of the 6ft average height berm as shown on sheet C108.

South line – Class 1, Type A buffer required adjacent to B1 zoning. The 20' fence clear zone will be part of the provided 25' buffer zone. The required Class 1, Type A buffer zone trees will be planted interior of the fence in a clustered configuration. The detention pond adjacent to the 25' buffer yard will be planted with natural plantings.

South line – Class 2, Type A buffer required adjacent to Residential zoning. The 20' fence clear zone will be part of the provided 25' buffer zone. The required Class 2, Type A buffer zone trees will be planted interior of the fence in a clustered configuration. The detention pond adjacent to the 25' buffer yard will be planted with natural plantings.

Building Height – the proposed buildings do not exceed 60'.

Lot coverage - does not exceed 75%

Site acreage =	2,105,379sf	= 48.32ac	
NW Pond		=	1.29ac
NE Pond		=	0.20ac
East Pond		=	0.18ac
SW Pond		=	1.47ac
SE Pond		=	0.49ac
Lot Area		= 4	44.69ac
Office/Warehouse =	51,200sf	=	1.18ac
Gas Barn =	20,000sf	=	0.46ac
Electric Barn =	6,000sf	=	0.83ac



Fleet = 42,000sf = 0.96acFuture Structures max =250,000sf = 5.74acTotal = 9.17ac

Lot Coverage = 9.17 / 44.69 = 20.5%

4.0 Deviations

Buffers – A 6' tall security fence will be installed around the perimeter of the site. Sightlines thru and along the fence must be maintained. The fence will be located a minimum of 10' from the property line and a 10' clear zone will be located on both sides of the fence line. There will not be any plantings other than turf grass in this clear zone.

All trees and shrubs required for all buffer zones will be planted inside the security fence, and may be placed interior to the site along the buffer yard, outside the limits of the buffer zone area.

In buffer zones that require an opaque fence, the security fence will not include any opaque screening material.

In buffer zones where a 9ft high berm is provided, the tree and shrub requirements are omitted.

In buffer zones where there is a detention pond adjacent to the buffer zone, the pond will be planted in native plantings and the shrub requirements are omitted.

Building Height

The office/warehouse building maximum height shall be 40'

The fleet building maximum height shall be 60'

The maximum height of all other accessory buildings shall be 35'

5.0 Water and Sewer Systems

The project will be connected to the New Paris Conservancy District for Sanitary Sewer service. DVG has been in contact with JPR, the New Paris Conservancy District Consulting Engineer regarding sewer service availability and the recommended connection point. The project proposes a private lift station, which will include backup power.

The project will be constructing a private well for potable water, as there is no public water system available in this area. Due to the size of the system, it is likely to be classified as a Non-Transient Non-Community Public Well by IDEM. IDEM water has been onsite to



evaluate the well site location. Upon commencement of the project the owner will complete the New Well Site Survey and begin the process of establishing NIPSCO as the well system operator.

6.0 Traffic

DVG Team, Inc. is a prequalified design firm with the Indiana Department of Transportation to perform minor traffic studies in Indiana. DVG has conducted traffic counts in the area and has been in contact with INDOT regarding this project. The traffic impact analysis will follow shortly. Road improvements required by INDOT and the Elkhart County Highway Department will be included in this project.

7.0 Storm Water

The storm water detention system is being designed using the current Elkhart County Highway Stormwater design requirements. The rational method using the rainfall data points from the ordinance, the 10yr storm release rate was determined. The detention system will provide volume for the peak 100yr event, using a positive release at grade at the northwest corner of the site. A storm sewer system will be provided to convey storm water to the detention ponds. The site is very flat, having 8ft of grade difference from south to north. An exhibit has been included showing the proposed drainage areas and the storage requirements required and provided for each basin.

8.0 Community and Environmental Considerations

The site will operate 24/7/365. To minimize community impact, the property will be enclosed with a security fence and screened with landscape berms, trees and shrubs. Particular attention to these screening measures has been provided along residential adjoiners. Natural planting buffers will be placed along the west property line. Lighting will comply with dark-sky standards, and the photometric plan will ensure zero light trespass beyond property boundaries. The project is consistent with development anticipated along major throughfares such as SR15.

The proposed facility is consistent with other manufacturing and office facilities in the area. The project is likely to provide an economic benefit to the area with increased needs of employees for things such as fuel and food. NIPSCO serves the community with utility services and continues its commitment to the people they serve by being a good neighbor in the specific areas that their facilities are a part of.



Legal Description

PARCEL DESCRIPTION:

A PARCEL OF LAND BEING A PART OF THE FRACTIONAL NORTHEAST QUARTER OF SECTION 4, TOWNSHIP 35 NORTH, RANGE 6 EAST, JACKSON TOWNSHIP, ELKHART COUNTY, INDIANA, SAID PARCEL DESCRIBED AS FOLLOWS: BEGINNING AT A HARRISON MONUMENT MARKING THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE SOUTH 00 DEGREES 32 MINUTES 02 SECONDS EAST, 1171.78 FEET ALONG THE EAST LINE OF SAID NORTHEAST QUARTER TO THE NORTH LINE OF LAND DESCRIBED TO DENNIS J. AND CAROL I. CHUPP RECORDED AS DOCUMENT NUMBER 2019-08621, ON MAY 7, 2019 IN THE OFFICE OF THE RECORDER OF SAID COUNTY; THENCE NORTH 89 DEGREES 05 MINUTES 04 SECONDS WEST, 431.40 FEET ALONG LAST SAID NORTH LINE TO THE NORTHWEST CORNER OF SAID CHUPP LAND; THENCE SOUTH 01 DEGREE 49 MINUTES 40 SECONDS WEST, 452.27 FEET ALONG THE WEST LINE OF SAID CHUPP LAND TO THE SOUTHWEST CORNER THEREOF; THENCE SOUTH 89 DEGREES 05 MINUTES 04 SECONDS EAST, 450.04 FEET ALONG THE SOUTH LINE OF SAID CHUPP LAND TO THE EAST LINE OF SAID NORTHEAST QUARTER; THENCE SOUTH 00 DEGREES 32 MINUTES 02 SECONDS EAST, 82.11 FEET ALONG LAST SAID EAST LINE; THENCE SOUTH 89 DEGREES 27 MINUTES 58 SECONDS WEST, 28.62 FEET TO THE WEST LINE OF STATE ROAD 15 AS DESCRIBED IN DOCUMENT NUMBER 1993-026835 RECORDED ON OCTOBER 14, 1993 IN SAID RECORDER'S OFFICE; THENCE ALONG LAST SAID WEST LINE OF STATE ROAD 15 THE FOLLOWING FIVE (5) COURSES AND DISTANCES:

- (1) SOUTH 10 DEGREES 44 MINUTES 11 SECONDS WEST, 50.99 FEET;
- (2) SOUTH 00 DEGREES 45 MINUTES 46 SECONDS WEST, 214.40 FEET;
- (3) SOUTH 06 DEGREES 36 MINUTES 52 SECONDS WEST, 176.22 FEET;
- (4) SOUTH 19 DEGREES 33 MINUTES 57 SECONDS WEST, 283.12 FEET;
- (5) SOUTH 29 DEGREES 45 MINUTES 00 SECONDS WEST, 42.07 FEET TO THE NORTHEAST CORNER OF LAND DESCRIBED TO CONSERVATIVE BUSINESS CONCEPTS, LLC RECORDED AS DOCUMENT NUMBER 2023-11374, ON JULY 13, 2023 IN SAID RECORDER'S OFFICE; THENCE ALONG THE NORTH AND WEST LINES OF SAID CONSERVATIVE BUSINESS CONCEPTS, LLC

LAND THE FOLLOWING THREE (3) COURSES AND DISTANCES:

- (1) NORTH 57 DEGREES 03 MINUTES 26 SECONDS WEST, 146.37 FEET,
- (2) NORTH 83 DEGREES 01 MINUTE 00 SECONDS WEST, 249.43 FEET
- (3) SOUTH 06 DEGREES 59 MINUTES 00 SECONDS WEST, 63.46 FEET TO THE NORTHWEST CORNER OF LOT 1 IN BROOKVIEW FARMS PHASE ONE, AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 30, PAGE 54, AS DOCUMENT NUMBER 2005-31825, ON OCTOBER 4, 2005 IN SAID RECORDER'S OFFICE;

THENCE ALONG THE NORTH AND WEST LINES OF SAID BROOKVIEW FARMS – PHASE ONE THE FOLLOWING FIVE (5) COURSES AND DISTANCES:

- (1) NORTH 83 DEGREES 01 MINUTE 00 SECONDS WEST, 50.03 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 1025.00 FEET, AND A CHORD THAT BEARS SOUTH 04 DEGREES 12 MINUTES 11 SECONDS WEST, 169.30 FEET;
- (2) SOUTHERLY ALONG LAST SAID CURVE 169.49 FEET;
- (3) SOUTH 00 DEGREES 32 MINUTES 03 SECONDS EAST, 59.96 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 35.00 FEET, AND A CHORD THAT BEARS SOUTH 44 DEGREES 14 MINUTES 02 SECONDS WEST, 49.30 FEET;
- (4) SOUTHWESTERLY ALONG LAST SAID CURVE 54.69 FEET;

(5) SOUTH 89 DEGREES 00 MINUTES 08 SECONDS WEST, 100.00 FEET; THENCE SOUTH 00 DEGREES 59 MINUTES 52 SECONDS EAST, 40.00 FEET TO THE SOUTH LINE OF SAID NORTHEAST QUARTER; THENCE SOUTH 89 DEGREES 00 MINUTES 08 SECONDS WEST, 224.13 FEET ALONG LAST SAID SOUTH LINE TO THE WEST LINE OF LAND DESCRIBED TO FERNBROOK, LLC RECORDED AS DOCUMENT NUMBER 2007-18401, ON JULY 5, 2007 IN SAID RECORDER'S OFFICE; THENCE NORTH 00 DEGREES 33 MINUTES 43 SECONDS WEST, 2707.73 FEET ALONG LAST SAID WEST LINE TO THE NORTH LINE OF SAID NORTHEAST QUARTER; THENCE SOUTH 89 DEGREES 54 MINUTES 29 SECONDS EAST, 956.90 FEET ALONG LAST SAID NORTH LINE TO THE POINT OF BEGINNING, CONTAINING 50.73 ACRES MORE OR LESS.



Location Map



Parcels



This data layer is maintained by the Elkhart County Auditor and represents legally recorded parcels in Elkhart County.

This layer is a collaboration between 4 different adressing jurisdictions. The layer is updated daily through a single data souce provided by the Elkhart County. Planning & Development Department.

For addressing data discrepancies please use the following emails based on jurisdiction:

City of Elkhart: Geographic Information Systems Technician, Gio Alvarez, Gio Alvarez@coei.org

City of Goshen: Planning & Zoning Administrator, Rhonda Yoder, rhondayoder@goshencity.com

City of Nappanee: City Planner, Todd Nunemaker, hounemaker@nappanee.org

Town of Bristol, Town of Middlebury, Town of Milliersburg, Town of Wakarusa & Elkhart County unincorporated areas. Addressing Technician, Jocelyn Malmstrom. jmalmstrom@elkhartcounty.com

This data layer is maintained by Elkhart County Planning & Development and represents public and privately named roads in Elkhart County.

This data layer is maintained by the Elkhart County Auditor and represents the boundary of Elkhart County.

Date created: 5/28/2025 Last Data Uploaded: 5/28/2025 8:08:15 AM Developed by





Site Location Aerial Photograph

Autodesk Revit 2023

__ D __

NISOURCE - NEW OPERATIONS CENTER NEW PARIS, IN

DATE OF SURVEY

1. TOPOGRAPHIC SURVEY COMPLETED 04/2025.

1155 Troutwine Road Crown Point, IN 46307 P: (219) 662-7710 F: (219) 662-2740 www.dvgteam.com



FEMA FIRM Map

National Flood Hazard Layer FIRMette

250

500

1,000

1,500

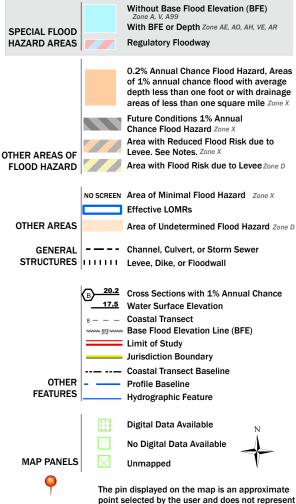




2,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

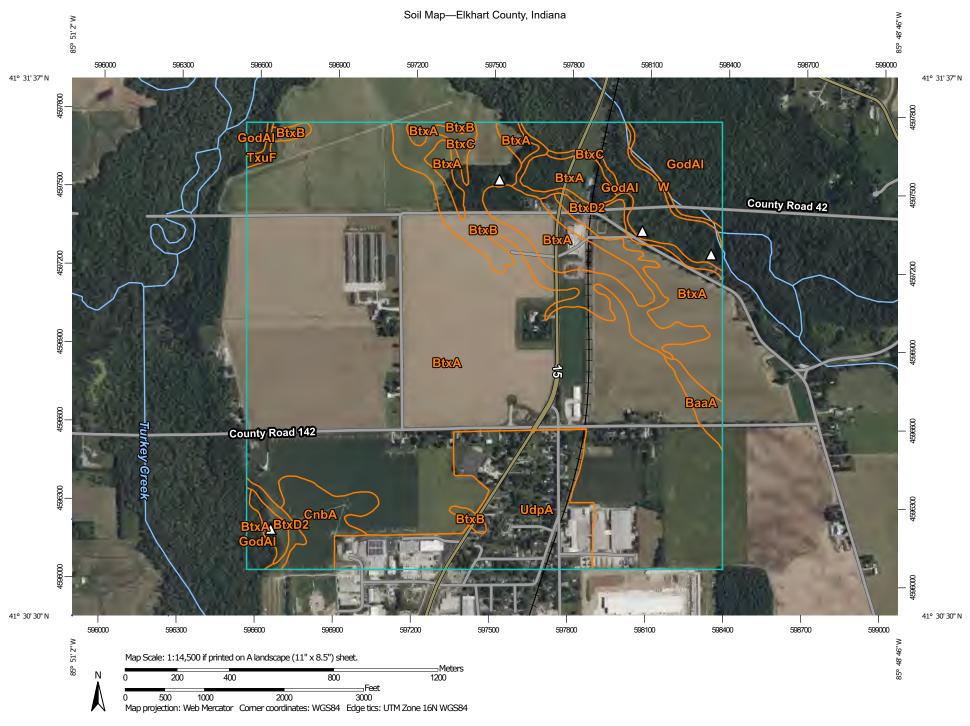
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/28/2025 at 5:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

an authoritative property location.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



NRCS Soil Maps



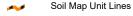
MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout

 \boxtimes Borrow Pit

36 Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

â Stony Spot

00 Very Stony Spot

Spoil Area

Wet Spot Other

Special Line Features

Water Features

Δ

Streams and Canals

Transportation

Rails ---

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12.000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Elkhart County, Indiana Survey Area Data: Version 27, Aug 28, 2024

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Jun 16, 2022—Jun 21, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
ВааА	Bainter sandy loam, 0 to 1 percent slopes	6.2	0.8%			
BtxA	Bristol loamy sand, 0 to 2 percent slopes	536.4	69.0%			
BtxB	Bristol loamy sand, 2 to 5 percent slopes	58.5	7.5%			
BtxC	Bristol loamy sand, 5 to 10 percent slopes	5.5	0.7%			
BtxD2	Bristol loamy sand, 10 to 18 percent slopes, eroded	10.3	1.3%			
CnbA	Coloma sand, 0 to 2 percent slopes	18.9	2.4%			
GodAl	Gravelton loam, 0 to 1 percent slopes, frequently flooded, long duration	61.3	7.9%			
TxuF	Tyner loamy sand, 18 to 45 percent slopes	1.5	0.2%			
UdpA	Urban land-Bristol complex, 0 to 1 percent slopes	76.3	9.8%			
W	Water	2.4	0.3%			
Totals for Area of Interest	,	777.2	100.0%			



NIPSCO Hourly Access Report

2024 GATE ENTRY DATA Average

Arrival at the site	E Gate TOTAL	W Gate Total	Rear Gate TOTAL	TOTAL AVG TRAFFIC
5-6am	1.78	2.12	3.76	7.66
6-7am	5.59	6.85	5.2	17.64
7-8am	3.41	4.31	3.35	11.07
8-9am	1.83	4.14	2.61	8.58
10am - 12pm	4.6	3.26	4.36	12.22
Depart from the site at the end of the day				
12-1pm	3.08	2.74	2.67	8.49
1-2pm	3.73	2.49	2.99	9.21
2-3pm	3.97	2.29	2.74	9
3-4pm	1.91	1.32	2.88	6.11
4-5pm	1.73	1.23	1.98	4.94
5-6pm	1.55	1.07	1.47	4.09
6-7pm	1.67	1.43	1.45	4.55
7-12am	3.9	1.49	2.22	7.61



Public Services Building • 4230 Elkhart Road, Goshen, Indiana 46526 (574) 971-4678 • DPS@ElkhartCounty.com • ElkhartCountyPlanningandDevelopment.com

TO: Plan Commission

FROM: H. Jason Auvil, Planning Manager & Zoning Administrator

SUB: Approvals of Plan Commission Recommendations

The following petition was **APPROVED** at the July 21, 2025, Elkhart County Commissioners' meeting:

1. Petitioner: Woodside Investments LLC represented by Land & Boundary LLC

Petition: for an amendment to an existing DPUD A-1 known as SCHROCK

FURNITURE DPUD to add an additional warehouse.

Location: southwest corner of CR 37 & CR 34, common address of 63041 CR 37 in

Clinton Township. (DPUD-0003-2025)

2. Petitioner: Mid-States Specialty Eggs of Middlebury LLC represented by Abonmarche

Consultants

Petition: for an amendment to an existing DPUD A-1 known as MSSE

MIDDLEBURY CR 20 MID-STATES DPUD to add property and amend the site plan, for a zone map change from A-4 & M-1 to DPUD A-1 and for primary approval of a 1-lot minor subdivision to be known as MSSE

MIDDLEBURY CR 20 MID-STATES DPUD A-1 AMENDMENT.

Location: north side of CR 20, 2,000 ft. east of CR 35, common address of 13659 CR

20 in Middlebury Township. (DPUD-0293-2025)

3. Petitioner: Tri County Land Trustee Corporation (Land Contract Holder) & John A.

Miller and Sue Miller, Husband and Wife (Land Contract Purchaser)

represented by Surveying and Mapping, LLC

Petition: for a zone map change from A-1 to DPUD M-1 and for primary approval of a

1-lot minor subdivision to be known as MID RIVER SALES DPUD M-1.

Location: south side of CR 18, 2,050 ft. west of East County Line Road, common

address of 10348 CR 18 in Middlebury Township. (DPUD-0275-2025)