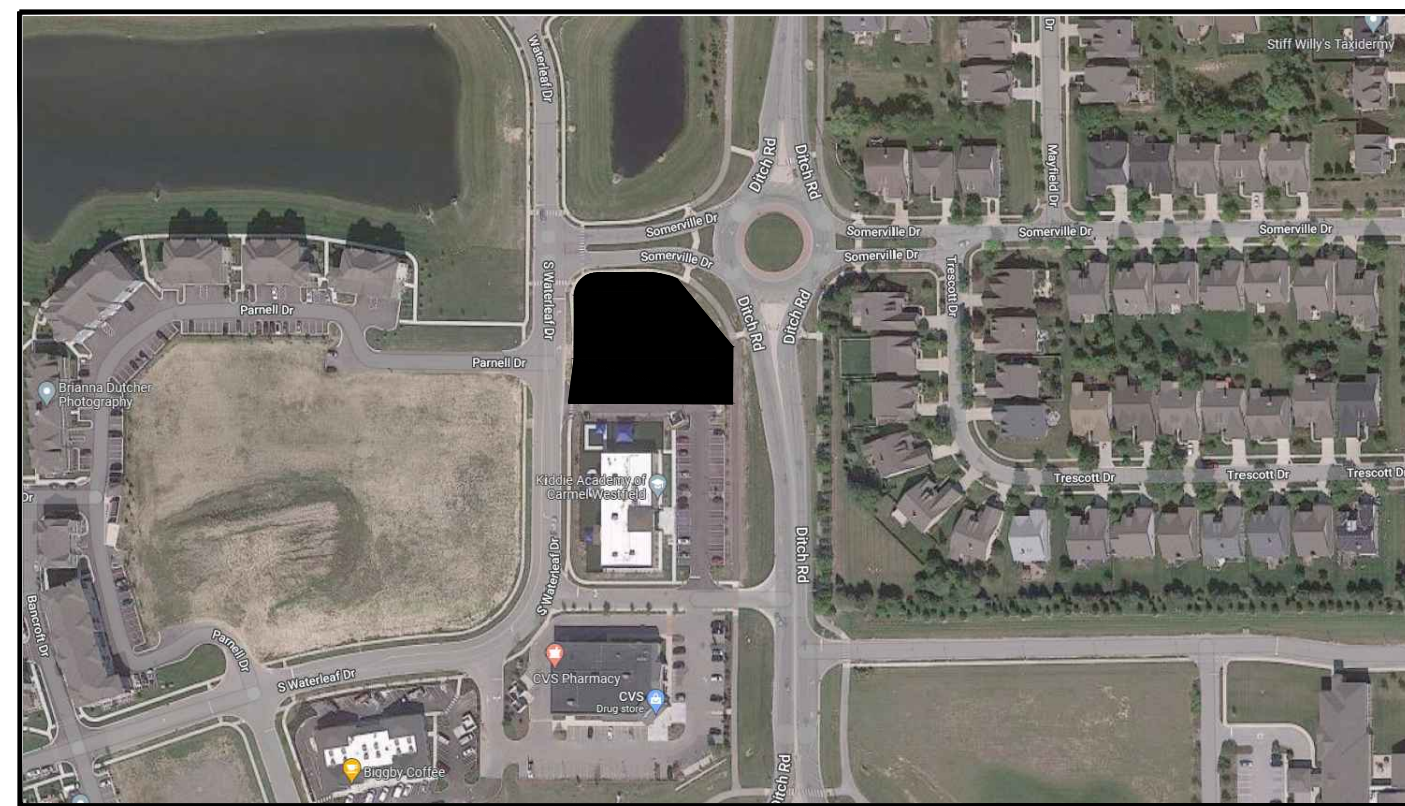
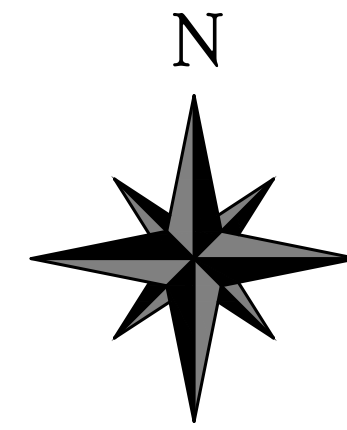


Harmony Pointe

1333 S. Waterleaf Drive Westfield, Indiana 46074



VICINITY MAP



LOCATION MAP



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Yc1A	Crosby silt loam, fine-loamy subsoil-Urban land complex, 0 to 2 percent slopes	0.3	41.3%
YmsB2	Miami silt loam-Urban land complex, 2 to 6 percent slopes, eroded	0.4	58.7%
Totals for Area of Interest		0.7	100.0%

UTILITY COMPANIES

City of Westfield

City of Westfield
2728 E. 171st Street
Westfield, IN 46074
PH: (317) 804-3170

Electric – Duke Energy

Duke Energy
100 S. Mill Creek Road
Noblesville, IN 46062
PH: (800) 774-0246

Gas – CenterPoint Energy

CenterPoint Energy
16000 Allisonville Road
Noblesville, IN 46060
PH: (317) 716-5590

Sanitary Sewer – Citizens Westfield

Citizens Westfield
2150 Dr. Martin Luther King Dr.
Indianapolis, IN 46202
PH: (317) 917-5294

Water – Citizens Westfield

Citizens Westfield
2150 Dr. Martin Luther King Dr.
Indianapolis, IN 46202
PH: (317) 917-5294

Storm Sewer – City of Westfield

City of Westfield
2728 E. 171st Street
Westfield, IN 46074
PH: (317) 804-3150

OWNER INFORMATION

Harmony Pointe, LLC
c/o Frank Swiss
4000 W. 106th Street, #125
Carmel, Indiana 46032
PHONE: (317) 507-7313
EMAIL: fswiss@swisscorealestate.com

PROPOSED PROJECTS ADDRESS

Harmony Pointe
1333 S. Waterleaf Drive
Westfield, Indiana 46074

BUILDING INFORMATION:

MISCELLANEOUS BUILDING INFORMATION:
OCCUPANCY GROUP: B, CONSTRUCTION TYPE V-B
TOTAL SQUARE FOOTAGE: 5,620.0 SQ. FT.
BUILDING MAX HT. 32'-8"
BUILDING DESIGN TO MEET EARTHQUAKE ZONE ONE
BUILDING TO MEET ADA (AMERICAN DISABILITY ACT)

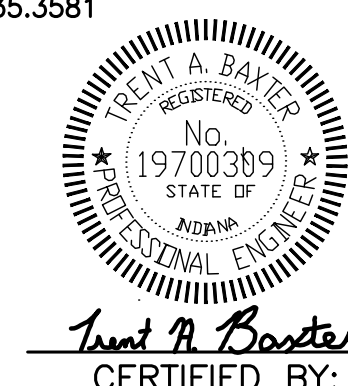
ENGINEERING AND CERTIFICATION:



**VERSATILE
CONSTRUCTION
GROUP, LLC.**

570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Email: tbaxter@versatile-llc.com
Ph: 317.535.3579 Fax: 317.535.3581

PLANS CERTIFIED BY:
TRENT A. BAXTER P.E.
REGISTERED P.E. No. 19700309
DATE: AUGUST 15, 2022



CERTIFIED BY:

EQUIVALENT RUNOFF UNIT:

ERU = 24,445 sq.ft./ 3,500
ERU = 6.984

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
T100	TITLE SHEET
CIVIL PLANS	
C050	SITE RE-PLAT LOT 2 OF HARMONY
C100	SITE AREA AND ZONING PLAN
C200	SITE LAYOUT PLAN
C210	SITE LANDSCAPING PLAN
C300	SITE UTILITY PLAN
C310	SITE PHOTOMETRIC PLAN
C400	SITE GRADING PLAN
C410	STORM SEWER PROFILE PLAN
C500	SITE EROSION CONTROL PLAN
C510	EROSION CONTROL DETAILS
C520	EROSION CONTROL DETAILS
C530	EROSION CONTROL DETAILS, IMPLEMENTATION AND MAINTENANCE GUIDELINES
C600	GENERAL SITEWORK DETAILS
C610	GENERAL SITEWORK DETAILS
C700	GENERAL SITEWORK NOTES

- All Contractors Shall Review City Of Westfield Standards And Specifications Prior To Bidding On This Project. Additional Specifications, Not Included In This Set Of Plans, May Be Required.
<http://www.westfield.in.gov/egov/apps/document/center.egov?view=item;id=5010> X
- The presence of a City of Westfield review and acceptance stamp on plans does not relieve the Contractor or Developer from compliance of the "City of Westfield construction Standards, latest edition". This review only designates that the general conformance with design and specifications have been met. Field changes may become necessary in order to comply with the detailed City of Westfield Specifications.

REVISION

10/10/2022	revised per city comments
10/18/2022	revised per city comments
11/01/2022	revised per city comments
12/01/2022	revised storm sewer placement, inverts, and site lighting

REPLAT OF LOT 2 OF HARMONY MIXED USE DISTRICT

PART OF SECTION 16, TOWNSHIP 18 NORTH, RANGE 3 EAST,
WASHINGTON TOWNSHIP, HAMILTON COUNTY, IN
WESTFIELD INDIANA

DEED OF DEDICATION

We the undersigned owners of the real estate shown and described herein, do hereby certify that we have laid off, platted and subdivided, and do hereby lay off, plat and subdivide, said real estate in accordance with the within plat

This subdivision shall be known and designated as Replat of Lot 2 of Harmony Mixed Use District, an addition to Westfield, Indiana. All public rights-of-way shown and not heretofore dedicated are hereby dedicated to the public.

Front and side yard building setback lines are hereby established as shown on this plat, between which lines and the property lines of the street, there shall be erected or maintained no building or structure

Easements and Covenants

The Owners expressly covenant and warrant on behalf of themselves and all future owners of the Lots and Block within this subdivision that the streets, driveways, sidewalks, landscaping, and signs not located within public right of way are private and that all maintenance, repairs, and replacement now and forever shall be undertaken at the expense of the Lot and Block owners in accordance with the terms and conditions set forth in the owners association bylaws and articles. No governmental entity has any duty or responsibility to maintain, repair, or replace any private street, driveway, sidewalk, landscaping, or sign not located within public right of way

Private Street Easement

The Private Street Easement is hereby established and shown on this instrument, which shall be (i) a non-exclusive, irrevocable, and perpetual easement appurtenant to the Lots and Block described in this subdivision and for the benefit of the Lots and Block described in this subdivision, and (ii) a perpetual and non-exclusive easement in favor of the Owners and their successors, assigns, or designees, including an owners association, for the maintenance, repair, and replacement of the Private Street Easement. The Private Street Easement, and all rights in and to the Private Street Easement, is declared, created, made, and reserved for the purposes of ingress and egress by vehicles and pedestrians. No obstruction shall be placed within the Private Street Easement.

The area shown on the plat as "Private Street Easement" shall be maintained as a private drive, and the undersigned owners, and their successors and assigns, hereby waive all rights to petition the City of Westfield to be responsible for the maintenance and ownership of such private streets

Shared Driveway Easement

The Shared Driveway Easement is hereby established and shown on this instrument, which shall be (i) a non-exclusive, irrevocable, and perpetual easement appurtenant to Lots 1 and 3 described in this subdivision and for the benefit of Lots 1 and 3 described in this subdivision, and (ii) a perpetual and non-exclusive easement in favor of the Owners and their successors, assigns, or designees, including an owners association, for the use, maintenance, repair and replacement of the Shared Driveway Easement. The Shared Driveway Easement, and all rights in and to the Shared Driveway Easement, is declared, created, made, and reserved for purposes of ingress and egress by vehicles and pedestrians to (and from) Waterleaf Drive from (and to) Lots 1 and 3. No obstruction shall be placed within the Shared Driveway Easement

Sign Easement

The Sign Easement is hereby established and shown on this instrument, such area being referred to as the "Sign Easement Area". The Sign Easement shall be (i) a non-exclusive, irrevocable, and perpetual easement appurtenant to the Lots and Block described in this subdivision and for the benefit of the Lots and Block described in this subdivision, and (ii) a perpetual and non-exclusive easement in favor of the Owners and their successors, assigns, or designees, including an owners association, for the use, maintenance, repair and replacement of the Sign Easement Area and to enter upon and across such portions of the Lots and Block of this subdivision as shall be necessary for such purposes. The Sign Easement, and all rights in and to the Sign Easement, is declared, created, made, and reserved for the purposes of (i) installing, erecting, and providing one or more signs (the "Signs") in the Sign Easement Area which identify and/or advertise the subdivision and comply with such signage standards and requirements pursuant to applicable laws, including, but not limited to, applicable zoning ordinances, (ii) including landscaping associated with the Signs, and (iii) further developing the subdivision. Unless otherwise provided for in this grant of Sign Easement, no obstruction shall be placed in front of the Signs. The Signs and associated landscaping shall not be altered, removed, or otherwise impaired in contradiction with the Sign Easement herein granted

Sidewalk/Access Easements

Sidewalk Access Easements are hereby established and shown on this instrument as "Sidewalk/Access Easement", which shall be (i) non-exclusive, irrevocable, and perpetual easements appurtenant to the Lots and Block described in this subdivision and for the benefit of the Lots and Block described in this subdivision, and (ii) perpetual and non-exclusive easements in favor of the Owners and their successors, assigns, or designees, including an owners association, for the maintenance,

repair, and replacement of the Sidewalk Access Easements. The Sidewalk Access Easements, and all rights in and to the Sidewalk Access Easements, are declared, created, made, and reserved for the purposes of ingress and egress by pedestrians. No permanent or other structures shall be erected within the Sidewalk Access Easements

Landscaping Easements

Landscaping Easements are hereby established and shown on this instrument as "L.E.", which shall be (i) non-exclusive, irrevocable, and perpetual easements appurtenant to the Lots and Block described in this subdivision and for the benefit of the Lots and Block described in this subdivision, and (ii) perpetual and non-exclusive easements in favor of the Owners and their successors, assigns, or designees, including an owners association, for the maintenance, repair, and replacement of the Landscaping Easements. The Landscaping Easements, and all rights in and to the Landscaping Easements, are declared, created, made, and reserved for the purposes of installation and maintenance of the required perimeter landscaping. No permanent or other structures shall be erected within the Landscaping Easements

Drainage Easements, Drainage and Utility Easements (Alternative Used on Previous Plat)

These are strips of ground shown on this instrument as variable sizes which are reserved solely for the installation and maintenance of underground utilities for the non-exclusive use of the city and county in which this subdivision is located, and for utility companies for the installation and maintenance of underground mains, ducts, sewers and drainage, subject at all times to approval from the proper authorities and the provisions of any recorded easements. No permanent or other structures shall be erected or maintained on said strips, including, but not limited to, fences, patios, and decks. Mounding and landscaping are permitted within a drainage and utility easement as long as they do not impede the free flow of storm water

WOODMONT WESTFIELD DITCH ACADEMY, LLC

a Texas limited liability company

By Woodmont KA Westfield Ditch GP LLC,

A Texas limited liability company,

its Manager

By *[Signature]*

Grant Gary
General Manager

STATE OF Texas)
COUNTY OF Tarrant) SS

Before me, a Notary Public in and for said County and State, personally appeared

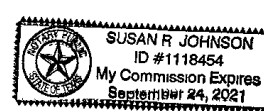
Grant Gary
General Manager of Woodmont KA Westfield Ditch GP LLC, the Manager of Woodmont Westfield Ditch Academy, LLC and acknowledged the execution of the foregoing

Secondary Plat for and on behalf of said entity Witness my hand and Notarial Seal this 11th day of September, 2020

My Commission Expires Sept. 24, 2021

Residing in Tarrant
County Texas

[Signature]
Notary Public
Josua R Johnson
Printed Name



SOURCE OF TITLE:
WOODMONT WESTFIELD DITCH ACADEMY, LLC
INSTR. NO. 20200052637

LEGEND	LIMITED ACCESS RIGHT-OF-WAY PER INSTR. NO. 201508140	PREPARED BY/LAND SURVEYOR	DEVELOPER
D.A.U.E	DRAINAGE AND UTILITY EASEMENT	MICHAEL J. SMITH	WOODMONT CM LLC
R.D.E	REGULATED DRAINAGE EASEMENT	AMERICAN STRUCTUREPOINT, INC	2100 West 7th Street Fort Worth, TX 76107
D.U.&L.E	DRAINAGE, UTILITY & LANDSCAPE EASEMENT	7260 SHADELAND STATION INDIANAPOLIS, IN 46256	
B.S.L	BUILDING SETBACK LINE	317-547-5580	
○	3/8" IN DIA. REBAR W/CAP STAMPED "STRUCTUREPOINT - 0094" SET FLUSH		
□	4"x4"x30" CONCRETE W/CUT "4" SET FLUSH		

AMERICAN STRUCTUREPOINT INC 7260 SHADELAND STATION INDIANAPOLIS, IN 46256-3957 TEL. 317.547.5580 FAX 317.543.0270 www.structurepoint.com

SHEET 2 of 3
AUGUST 31, 2020

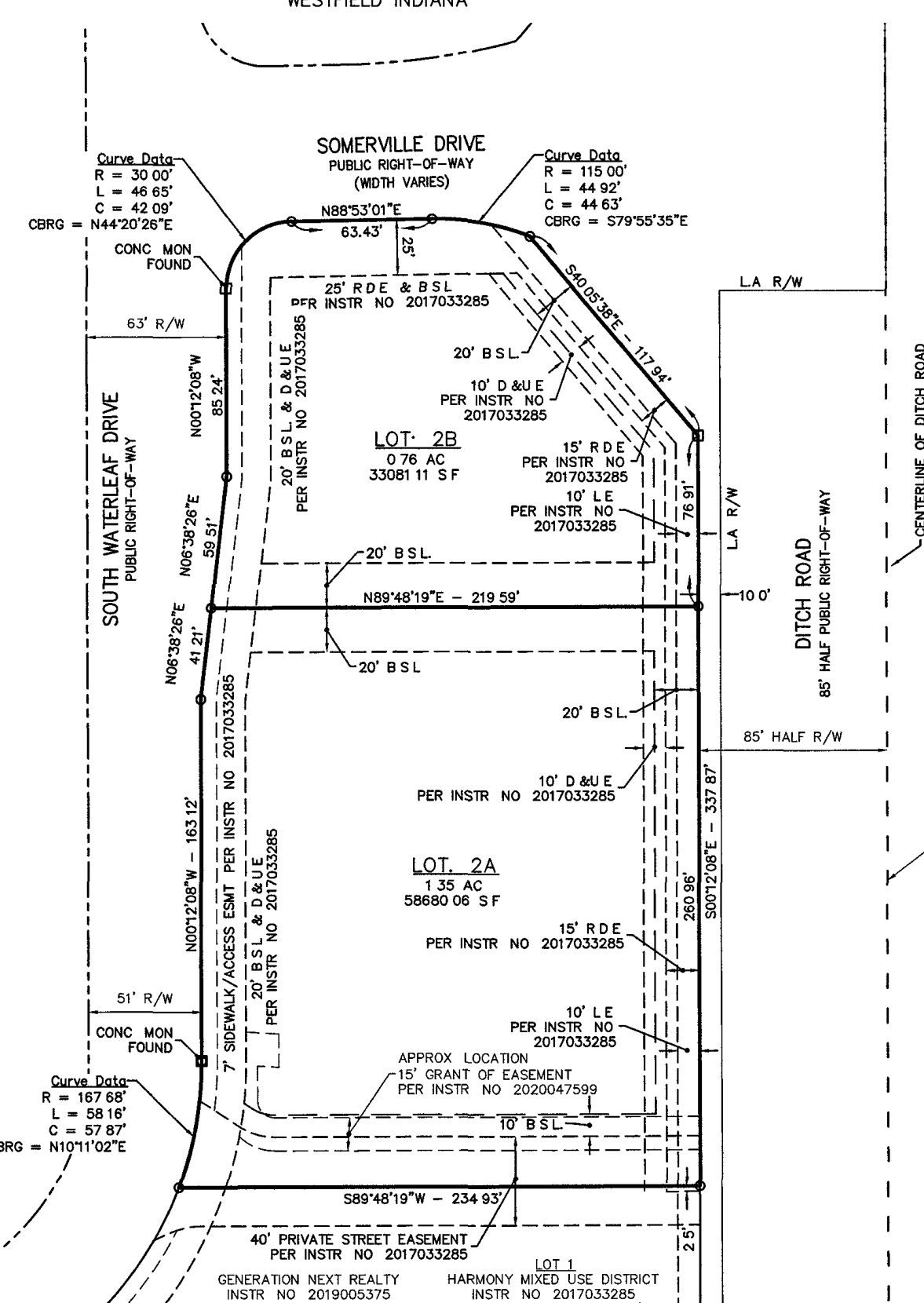
REPLAT OF LOT 2 OF HARMONY MIXED USE DISTRICT

PART OF SECTION 16, TOWNSHIP 18 NORTH, RANGE 3 EAST,
WASHINGTON TOWNSHIP, HAMILTON COUNTY, IN
WESTFIELD INDIANA

PC 5 slide 1192

DULY ENTERED FOR TAXATION
Subject to final acceptance for transfer
16... day of SEPTEMBER, 2020
Attest: *[Signature]* Clerk of Hamilton County
Parcel #

2020064178 PLAT
08/18/2022 02:25:24P 3 PGS
Jannifer Hayden
HAMILTON County Recorder IN
Recorded as Presented
[Barcode]



LEGEND	LIMITED ACCESS RIGHT-OF-WAY PER INSTR. NO. 201508140	PREPARED BY/LAND SURVEYOR	DEVELOPER
D.A.U.E	DRAINAGE AND UTILITY EASEMENT	MICHAEL J. SMITH	WOODMONT CM LLC
R.D.E	REGULATED DRAINAGE EASEMENT	AMERICAN STRUCTUREPOINT, INC	2100 West 7th Street Fort Worth, TX 76107
D.U.&L.E	DRAINAGE, UTILITY & LANDSCAPE EASEMENT	7260 SHADELAND STATION INDIANAPOLIS, IN 46256	
B.S.L	BUILDING SETBACK LINE	317-547-5580	
○	3/8" IN DIA. REBAR W/CAP STAMPED "STRUCTUREPOINT - 0094" SET FLUSH		
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AMERICAN STRUCTUREPOINT INC 7260 SHADELAND STATION INDIANAPOLIS, IN 46256-3957 TEL. 317.547.5580 FAX 317.543.0270 www.structurepoint.com

SHEET 1 of 3
AUGUST 31, 2020

REPLAT OF LOT 2 OF HARMONY MIXED USE DISTRICT

PART OF SECTION 16, TOWNSHIP 18 NORTH, RANGE 3 EAST,
WASHINGTON TOWNSHIP, HAMILTON COUNTY, IN
WESTFIELD INDIANA

LEGAL DESCRIPTION

Lot 2 in Harmony Mixed Use District, per plat thereof, recorded as Instrument Number 2017033285 in the Office of the Recorder of Hamilton County, Indiana

REGISTERED LAND SURVEYOR'S CERTIFICATE

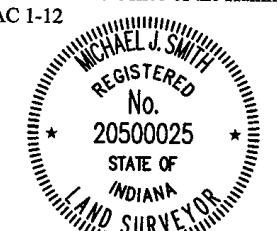
I, Michael J. Smith, hereby certify that I am a Registered Land Surveyor, licensed in compliance with the laws of the State of Indiana

The size of the lots and blocks and widths of the streets and easements are shown in figures denoting feet and decimal parts thereof.

The subdivision consists of Lots 2A and 2B and easements as shown herein.

The boundary lines for this plat are based on the Retraction Survey by American Structurepoint, Inc recorded April 26, 2017 as Instrument No. 20170114 in the Office of the Hamilton County Recorder. This Retraction Survey is in conformity with 865 IAC 1-12

[Signature]
Michael J. Smith
LS2050025
Date 8-31-2020



Monumentation Note

The monuments on the perimeter of the subdivision have been set prior to the recording of this plat. Some of the interior monuments may not have been set due to the probability that they will be disturbed during construction. An affidavit, cross-referenced to this plat, will be recorded after the interior monumentation has been completed, no later than two years after the recording of this plat.

I affirm, under penalties for perjury, that I have taken reasonable care to reflect each Said Security number in this document, unless required by law
- Michael J. Smith

LEGEND	LIMITED ACCESS RIGHT-OF-WAY PER INSTR. NO. 201508140	PREPARED BY/LAND SURVEYOR	DEVELOPER
D.A.U.E	DRAINAGE AND UTILITY EASEMENT	MICHAEL J. SMITH	WOODMONT CM LLC
R.D.E	REGULATED DRAINAGE EASEMENT	AMERICAN STRUCTUREPOINT, INC	2100 West 7th Street Fort Worth, TX 76107
D.U.&L.E	DRAINAGE, UTILITY & LANDSCAPE EASEMENT	7260 SHADELAND STATION INDIANAPOLIS, IN 46256	
B.S.L	BUILDING SETBACK LINE	317-547-5580	
○	3/8" IN DIA. REBAR W/CAP STAMPED "STRUCTUREPOINT - 0094" SET FLUSH		
□	4"x4"x30" CONCRETE W/CUT "4" SET FLUSH		

AMERICAN STRUCTUREPOINT INC 7260 SHADELAND STATION INDIANAPOLIS, IN 46256-3957 TEL. 317.547.5580 FAX 317.543.0270 www.structurepoint.com

SHEET 3 of 3
AUGUST 31, 2020

Plan Commission Certificate

Under authority provided by I.C. 36-7, enacted by the general assembly of the State of Indiana, and all acts amendatory thereto, and an ordinance adopted by the City Council of the City of Westfield, Hamilton County, Indiana, this plat was given approval by the Westfield-Washington Township Unified Development Ordinance, on the 15th day of September, 2020

Approved by the Director of the Economic and Community Development Department of the City of Westfield, Hamilton County, Indiana, pursuant to the Westfield-Washington Township Unified Development Ordinance, on the 15th day of September, 2020

Westfield-Washington Township Plan Commission

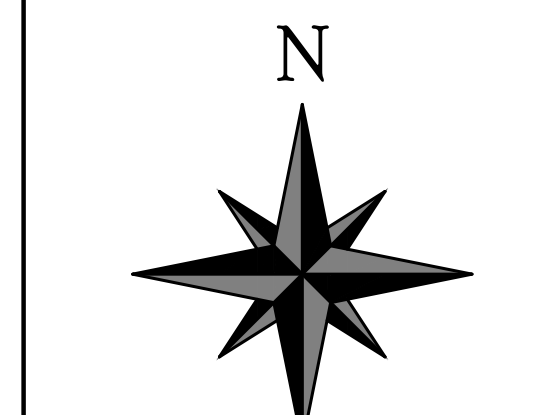
By *[Signature]*

Kevin M. Todd, Director
Economic and Community Development Department

Board of Public Works and Safety Certificate

This plat and the acceptance of any public rights-of-way dedicated herein as hereby approved on the 15th day of September, 2020, by the Director of the Public Works Department of the City of Westfield, Indiana, on behalf of the Board of Public Works and Safety, pursuant to Resolution 15-120 enacted by the Board of Public Works and Safety on August 26, 2015, and Article 7.4(B) of the Unified Development Ordinance

[Signature]
Kevin M. Todd, Director
Public Works Department



REVISION	10/18/2022 revised per city comments
----------	--------------------------------------



VERSATILE CONSTRUCTION GROUP, LLC.

570 East Troy Road, Suite 810
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
1335 S. Waterleaf Drive
Westfield, Indiana 46074

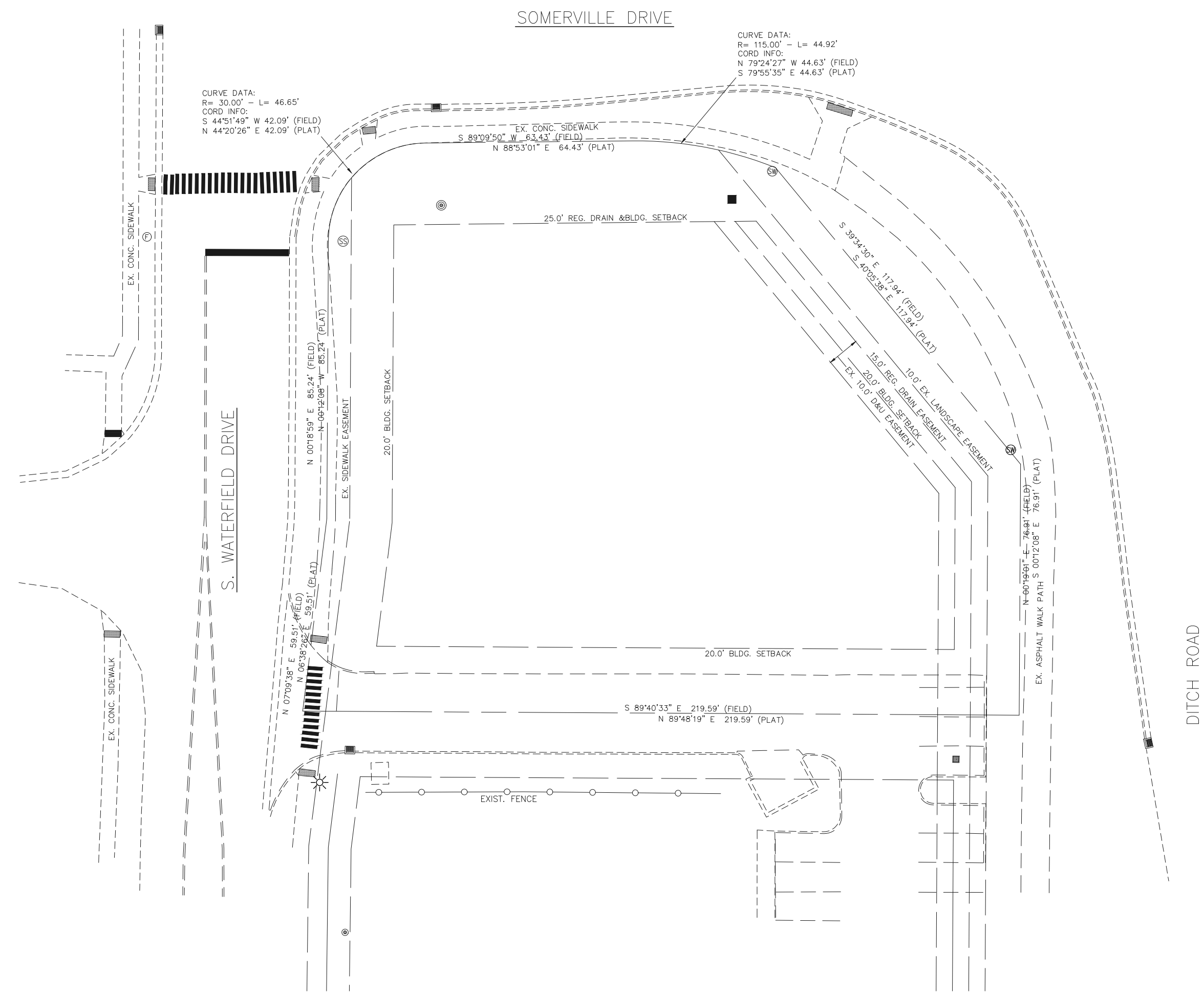
Site Re-Plat Lot 2 of Harmony

Job No.:	Date Stamped:
21068	08/15/2022
Drawn By:	Checked By:
---	---
Scale:	---

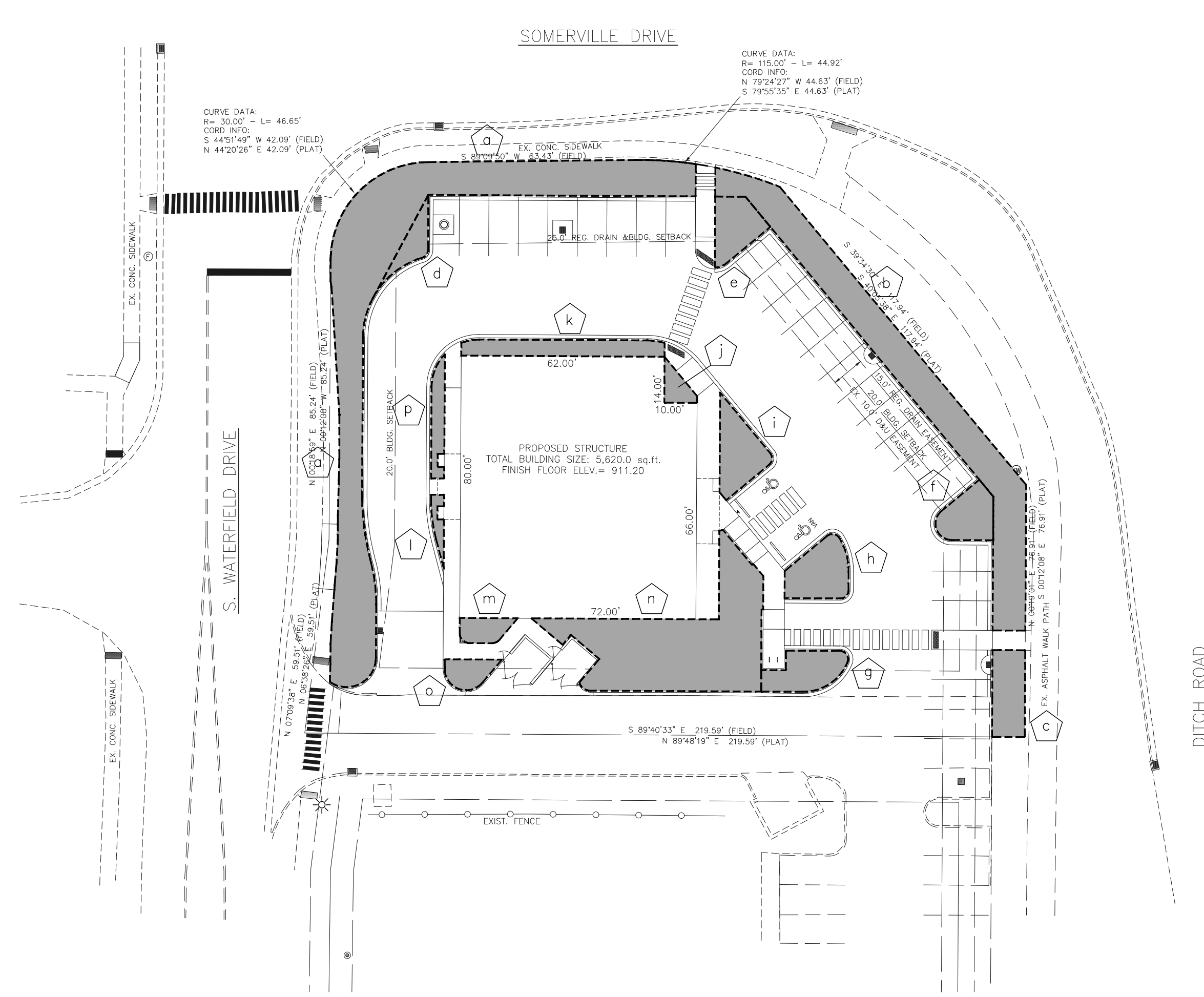
CAD FILE:
c:\21068\c050 plat plan.dwg

CERTIFIED BY:
THIS DRAWING IS THE PROPERTY OF VERSATILE CONSTRUCTION GROUP, LLC. ANY ALTERATION TO THIS DRAWING IS STRICTLY PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT AND UNDER THE DIRECTION OF THE PROFESSIONAL LICENSOR WHOSE SEAL IS AFFIXED TO THIS DRAWING.

SHEET TITLE:
C050



EXISTING SITE AREA PLAN
SCALE: 1" = 30.0'



PROPOSED SITE AREA PLAN
SCALE: 1" = 30.0'
(SEE SHEET No.s C200 FOR SPECIFIC LAYOUT INFORMATION)

GENERAL PROPOSED SITE INFORMATION:

DESCRIPTIONS:	AREAS:
BUILDING AREAS:	
DOCTOR'S OFFICE & RETAIL	5,620.00 sq.ft.
PARKING REQUIREMENTS:	
PARKING SPACES REQUIRED: (1 PARKING SPACE / 250 sq.ft.)	23
PARKING SPACES PROVIDED:	28 (inc. 2 HANDICAP)
BICYCLE PARKING PROVIDED:	04
TOTAL PROJECT AREA:	0.753± acres
BUILDING SET-BACK LINES:	
FRONT BUILDING SET-BACK:	20.0'
SIDE BUILDING SET-BACK:	20.0'
REAR BUILDING SET-BACK:	20.0'
ZONING:	
PROPERTY ZONING:	PUD
NORTH ZONING:	PUD
SOUTH ZONING:	PUD
EAST ZONING:	PUD
WEST ZONING:	PUD

PROPOSED LANDSCAPING AREAS:

SYMBOLS:	DESCRIPTIONS:	AREAS:
a	PROPOSED PERIMETER LANDSCAPING AREA:	2,768.33 sq.ft.
b	PROPOSED PERIMETER (ALSO COUNTED AS INTERIOR) LANDSCAPING AREA:	1,716.48 sq.ft.
c	PROPOSED PERIMETER (ALSO COUNTED AS INTERIOR) LANDSCAPING AREA:	264.75 sq.ft.
d	PROPOSED INTERIOR LANDSCAPING AREA:	122.89 sq.ft.
e	PROPOSED INTERIOR LANDSCAPING AREA:	263.67 sq.ft.
f	PROPOSED INTERIOR LANDSCAPING AREA:	234.33 sq.ft.
g	PROPOSED INTERIOR LANDSCAPING AREA:	250.11 sq.ft.
h	PROPOSED INTERIOR LANDSCAPING AREA:	290.47 sq.ft.
i	PROPOSED INTERIOR LANDSCAPING AREA:	288.27 sq.ft.
j	PROPOSED BUILDING LANDSCAPING AREA:	80.20 sq.ft.
k	PROPOSED BUILDING LANDSCAPING AREA:	304.14 sq.ft.
l	PROPOSED BUILDING LANDSCAPING AREA:	49.75 sq.ft.
m	PROPOSED BUILDING LANDSCAPING AREA:	108.53 sq.ft.
n	PROPOSED BUILDING LANDSCAPING AREA:	1,527.19 sq.ft.
o	PROPOSED BUILDING LANDSCAPING AREA:	116.34 sq.ft.
p	PROPOSED BUILDING LANDSCAPING AREA:	131.33 sq.ft.

PARCEL LEGAL DESCRIPTION:

LOT 2B OF THE REPLAT OF LOT 2 OF HARMONY MIXED USE DISTRICT, PART OF SECTION 16, TOWNSHIP 18 NORTH, RANGE 3 EAST, WASHINGTON TOWNSHIP, HAMILTON COUNTY, WESTFIELD, INDIANA.

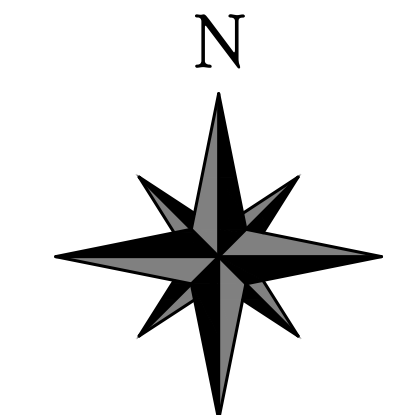
SITE AREA AND ZONING PLAN
SCALE: 1" = 30.0'



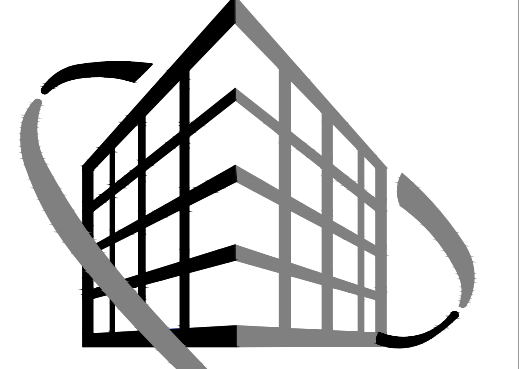
UTILITY DISCLAIMER

EXISTING UNDERGROUND INSTALLATIONS SUCH AS WATER MAINS, GAS MAINS, SEWERS, TELEPHONE LINES, AND BURIED STRUCTURES IN THE VICINITY OF THE WORK TO BE DONE HEREUNDER ARE INDICATED ON THE DRAWINGS ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE SURVEYOR IN PREPARING THIS DRAWING. THERE IS NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION, AND ALL RESPONSIBILITY FOR ACCURACY AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED.

TOTAL LANDSCAPING AREA:	8,356.38 sq.ft. (25.46% OF TOTAL SITE)
TOTAL INTERIOR LANDSCAPING AREA (7.5% REQUIRED):	3,430.97 sq.ft. (20.77% OF ALL UNCOVERED VEHICLE AREAS)



REVISION	DATE	DESCRIPTION
10/10/2022	revised per city comments	
10/18/2022	revised per city comments	



VERSATILE CONSTRUCTION GROUP, LLC.

570 East Troy Road, Suite 610
New Whiteland, Indiana 46184
PH: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
1335 S. Waterleaf Drive
Westfield, Indiana 46074

Site Area and Zoning Plan

Job No.:	21068	Date Stamped:	06/15/2022
Drawn By:	caw	Checked By:	tab
		Scale:	1" = 30.0'

CAD FILE: c:\21068\c100 site area and zoning plan.dwg

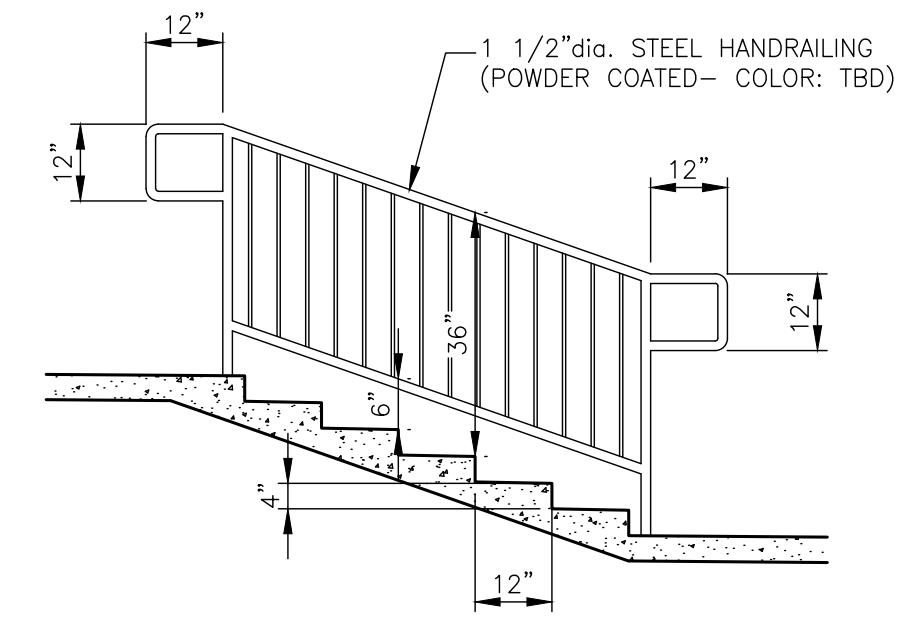
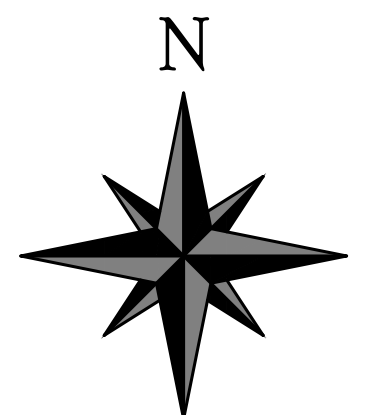


Trent A. Baxter
CERTIFIED BY:

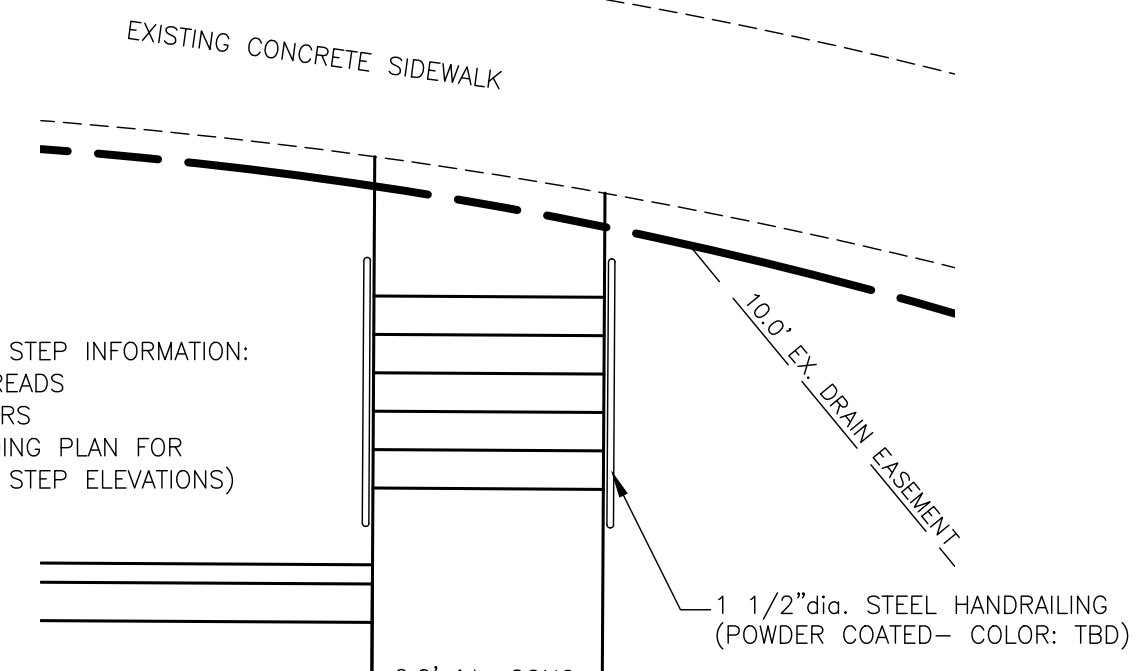
THIS DRAWING IS THE PROPERTY OF VERSATILE CONSTRUCTION GROUP, LLC. ANY ALTERATION TO THIS DRAWING IS STRICTLY PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT AND UNDER THE DIRECTION OF THE PROFESSIONAL LICENSOR WHOSE SEAL IS AFFIXED TO THIS DRAWING.

SHEET TITLE:
C100

PARCEL LEGAL DESCRIPTION:
 LOT 28 OF THE REPLAT OF LOT 2 OF HARMONY MIXED USE DISTRICT, PART OF SECTION 16, TOWNSHIP 18 NORTH, RANGE 3 EAST, WASHINGTON TOWNSHIP, HAMILTON COUNTY, WESTFIELD, INDIANA.



CONCRETE STEPS AND HANDRAIL DETAIL
 SCALE: no scale



CONCRETE STEPS PLAN
 SCALE: 1" = 5.0'

CONCRETE STEPS AND HANDRAIL DETAILS
 SCALE: AS INDICATED

LAYOUT SYMBOL INFORMATION:

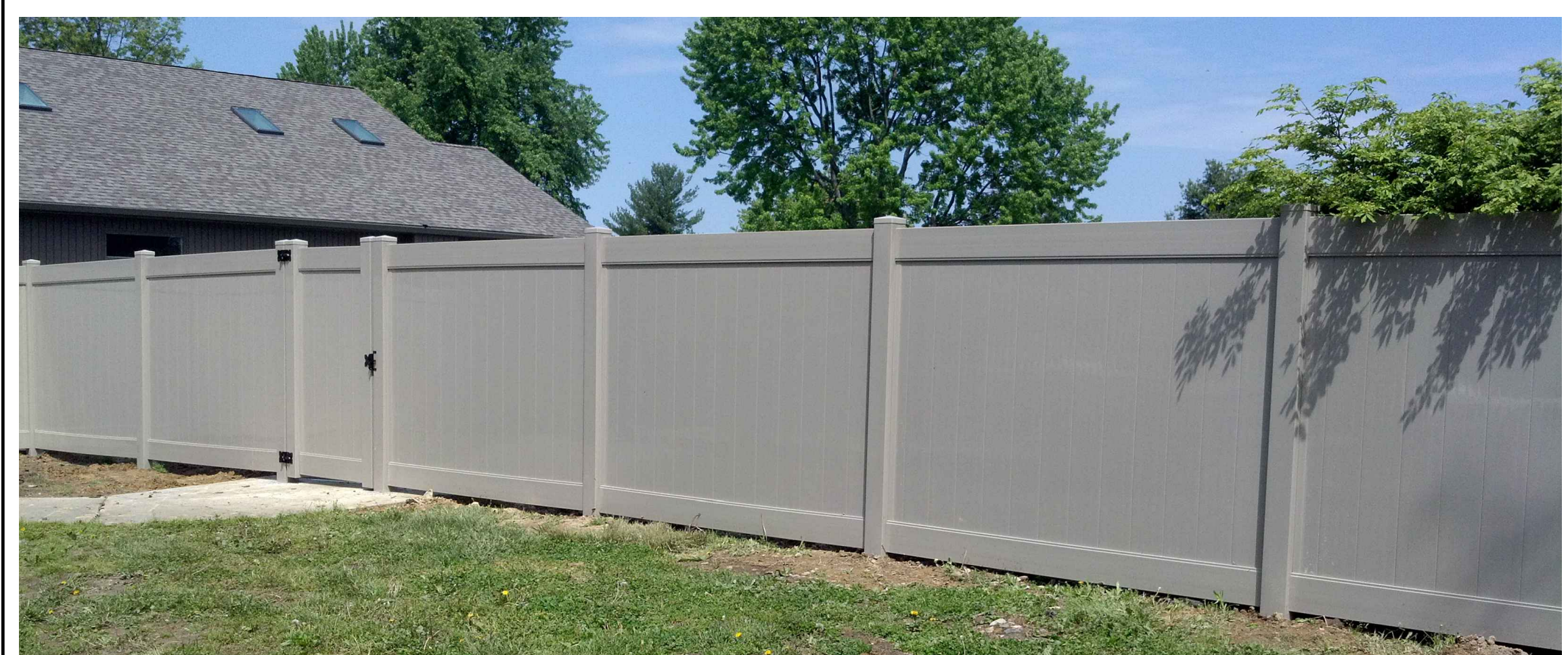
- 1 ALL HANDICAP RAMPS SHALL BE 4" CONCRETE AND SHALL INCLUDE AT THE BOTTOM OF RAMP: TRUNCATED DOME SYSTEM BY ARMOR-TILE TACTILE SYSTEM TRIDEN/WHITE CAP CONSTRUCTION SUPPLY 4510 INDUSTRIAL ROAD FORT WAYNE, INDIANA 46825 PH: (800) 553-7173
- 2 METAL HANDICAP PARKING SIGNS (SEE SITEWORK DETAILS)
- 3 METAL 'VAN' HANDICAP PARKING SIGNS (SEE SITEWORK DETAILS)
- 4 CONCRETE HANDICAP RAMPS (SEE SITEWORK DETAILS)
- 5 (2) BICYCLE RACK (SEE DETAIL, THIS PAGE)
- 6 SYMBOL INDICATES: LOCATION OF 12.0'x 35.0' LOADING AREA
- 7 PIPE BOLLARDS (SEE SITEWORK DETAILS)
- 8 PRE-MANUFACTURED CONCRETE PARKING BUMPERS (SEE SITEWORK DETAILS)
- 9 17'-9" L.F. OF NEW 6'-0" TALL VINYL PRIVACY FENCE (SEE DETAIL, THIS PAGE)
- 10 12'-7" L.F. OF NEW 6'-0" TALL VINYL PRIVACY FENCE (SEE DETAIL, THIS PAGE)

PAVEMENT INFORMATION:

- NO HATCH INDICATES: NORMAL DUTY PAVEMENT OF 1 1/2" HOT ASPHALT SURFACE OVER 2" BITUMINOUS BASE ON 6" COMPACTED No.53 STONE BASE ON COMPACTED SUB-GRADE TOTAL AREA: 4,350.0 sq.ft. (SEE SITEWORK DETAILS)
- HATCH INDICATES: HEAVY DUTY PAVEMENT OF 1 1/2" HOT ASPHALT SURFACE OVER 4" BITUMINOUS BASE ON 8" COMPACTED No.53 STONE BASE ON COMPACTED SUB-GRADE TOTAL AREA: 7,450.0 sq.ft. (SEE SITEWORK DETAILS)
- HATCH INDICATES: 6" CONCRETE SLAB WITH 6x6-10x10 W.W.F. OVER 6" COMPACTED GRANULAR FILL ON COMPACTED SUB-GRADE TOTAL AREA: 775.0 sq.ft. (SEE SITEWORK DETAILS)
- HATCH INDICATES: 7" CONCRETE SLAB WITH 6x6-10x10 W.W.F. OVER 6" COMPACTED GRANULAR FILL ON COMPACTED SUB-GRADE TOTAL AREA: 425.0 sq.ft. (SEE SITEWORK DETAILS)
- HATCH INDICATES: 4" CONCRETE SIDEWALK WITH 6x6-10x10 W.W.F. OVER 4" COMPACTED GRANULAR FILL ON COMPACTED SUB-GRADE TOTAL AREA: 2,050.0 sq.ft. (SEE SITEWORK DETAILS)

CURBING LAYOUT SYMBOL INFORMATION:

- a SYMBOL INDICATES: 6" TALL CONCRETE CURB AND GUTTER PER GENERAL SITEWORK DETAILS (TOTAL LENGTH: 305.0 I.F.)
- b SYMBOL INDICATES: 6" TALL CONCRETE CURB AND GUTTER WITH REVERSE SLOPE PER GENERAL SITEWORK DETAILS (TOTAL LENGTH: 300.0 I.F.)
- c SYMBOL INDICATES: 4" TALL CONCRETE CURB AND GUTTER PER GENERAL SITEWORK DETAILS (TOTAL LENGTH: 144.0 I.F.)
- d SYMBOL INDICATES: 4" TALL CONCRETE CURB AND GUTTER WITH REVERSE SLOPE PER GENERAL SITEWORK DETAILS (TOTAL LENGTH: 81.0 I.F.)



6.0' tall VINYL PRIVACY FENCE ELEVATION
 SCALE: NO SCALE

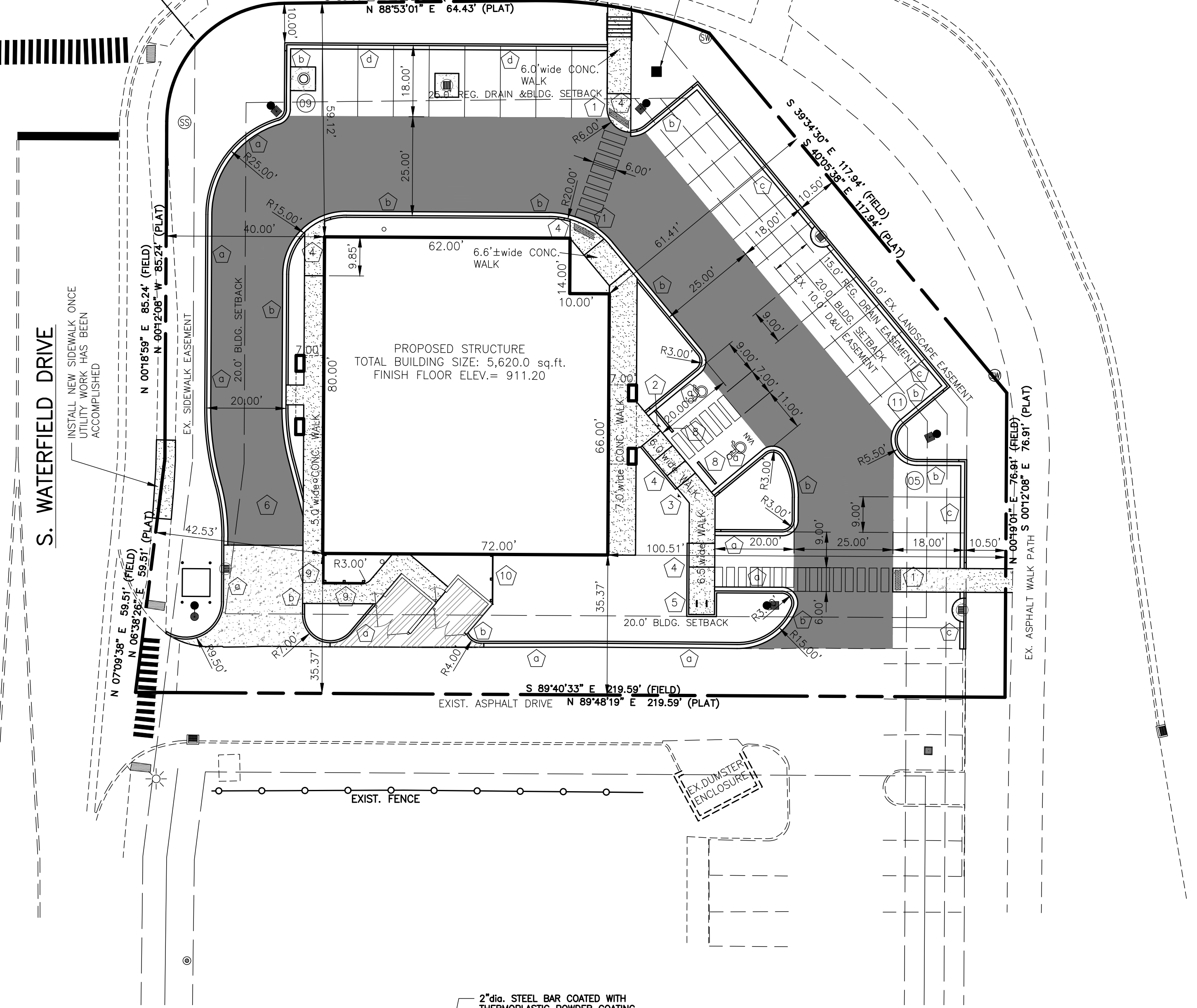
GENERAL NOTES:

- ALL LAYOUT DIMENSIONS SHALL BE TAKEN FROM THE NEW BUILDING AND SHALL BE PARALLEL WITH THE PROPERTY LINES.
- ALL DISTURBED AREAS (CONCRETE, ASPHALT PAVEMENT, DIRT, AND GRAVEL) SHALL BE PATCHED BACK TO THEIR ORIGINAL CONDITION WITH "LIKE" CONSTRUCTION.
- GENERAL CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION.
- ALL CONCRETE SIDEWALKS SHALL HAVE TOOLED SMOOTH CONTROL JOINTS AT 5.0' C-C. (MAXIMUM) WITH 1/2" EXPANSION JOINTS AT 50.0' C-C. (MAXIMUM).
- ALL PARKING LOT PARKING SPACES TO BE STRIPED WITH "WHITE" PAINT WITH THE EXCEPTION OF HANDICAP SPACES WHICH ARE TO BE PAINTED "BLUE".

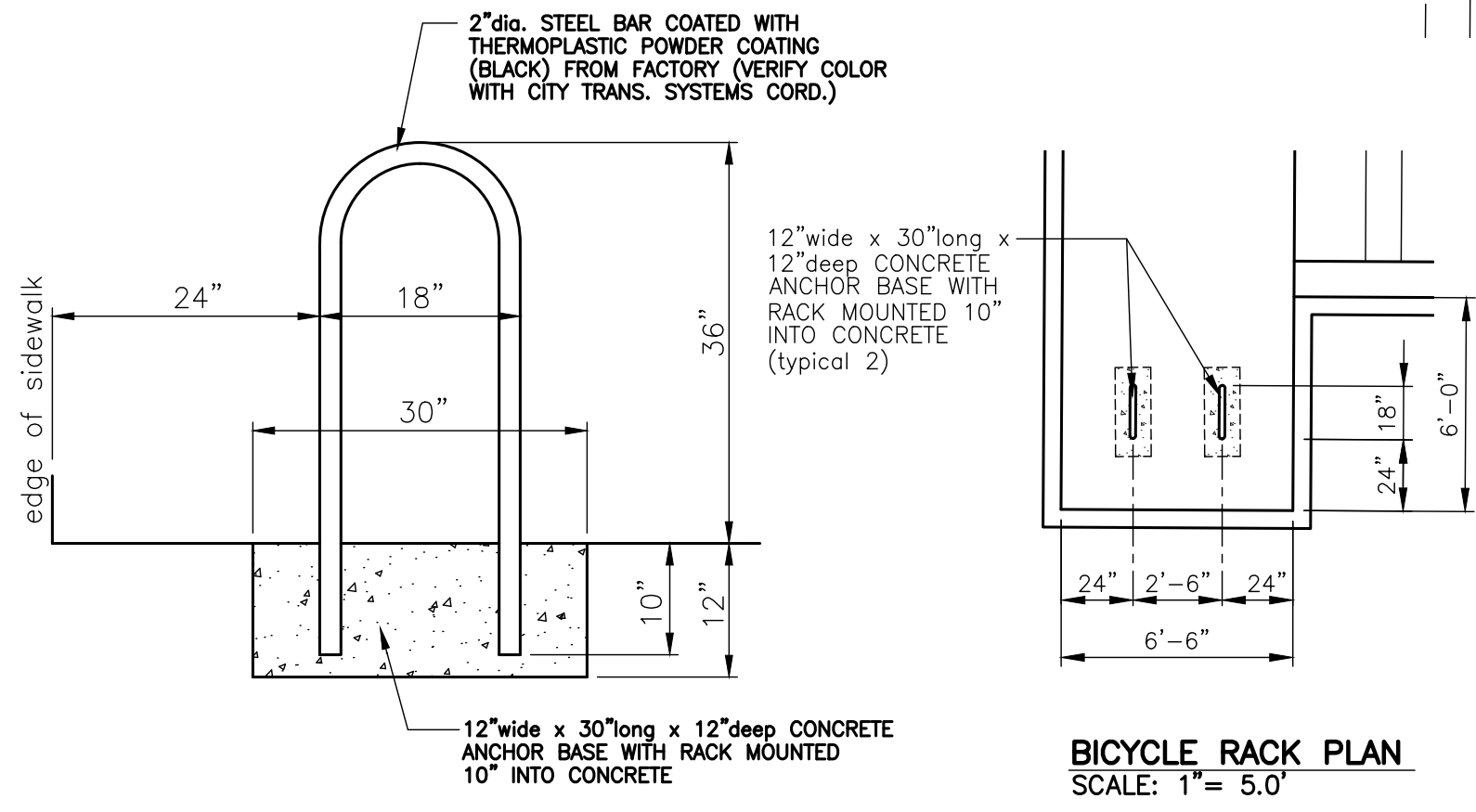
CURVE DATA:
 R= 30.00' - L= 46.65'
 CORD INFO:
 S 44°51'49" W 42.09' (FIELD)
 N 44°20'28" E 42.09' (PLAT)

NOTE:
 SEE ENLARGED CONCRETE STEPS DETAILS, THIS PAGE, FOR ADDITIONAL CONCRETE STEPS LAYOUT INFORMATION

CURVE DATA:
 R= 115.00' - L= 44.92'
 CORD INFO:
 N 79°24'27" W 44.63' (FIELD)
 S 79°55'35" E 44.63' (PLAT)



SITE LAYOUT PLAN
 SCALE: 1" = 20.0'



BICYCLE RACK ELEVATION (SIDE VIEW)
 SCALE: NO SCALE

BICYCLE RACK PLAN
 SCALE: 1" = 5.0'

BICYCLE PARKING RACK DETAILS
 SCALE: AS INDICATED

UTILITY DISCLAIMER

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REVISION	DATE	DESCRIPTION
10/10/2022	revised per city comments	
10/18/2022	revised per city comments	
12/01/2022	revised north curb & storm inlet	



VERSATILE CONSTRUCTION GROUP, LLC.

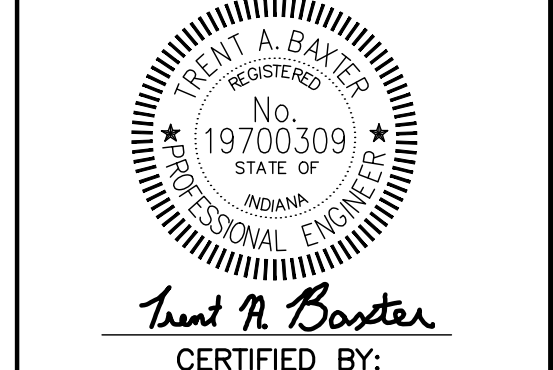
570 East Troy Road, Suite 610
 New Wildfield, Indiana 46154
 PH: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
 1335 S. Waterleaf Drive
 Westfield, Indiana 46074

Site Layout Plan

Job No.: 21068	Date Stamped: 08/15/2022
Drawn By: caw	Checked By: tab
Scale: 1" = 20.0'	

CAD FILE: c:\21068\c200 site layout plan.dwg



Trent A. Baxter
 CERTIFIED BY:

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C200

PLANTING SPECIFICATIONS:

- ALL PLANT MATERIALS SHALL CONFORM TO THE STANDARDS SET FORTH IN THE CURRENT EDITION OF THE AMERICAN STANDARDS NURSERY STOCK OF NURSERYMEN. PLANTS SHALL BE TYPICAL OF SPECIES AND VARIETY, AND HAVE NORMAL, WELL-DEVELOPED BRANCHING STRUCTURE AND VIGOROUS FIBROUS ROOT SYSTEM.
- PLANTS SHALL BE HEALTHY, VIGOROUS PLANTS FREE FROM INSECTS AND DISEASE. TRUNK AND STEMS SHALL BE FIRM WITH NO INDICATION OF FUNGUS CANKERS OR GALLS, INSECT BORERS, DIEBACK, FRONT CRACKS, OR OTHER DEFECTS.
- ALL PLANTS SHALL BE COMMERCIAL GROWN AND NO PLANTS FROM THE WILD SHALL BE ACCEPTABLE WITHOUT SPECIFIC APPROVAL FROM THE DIVISION OF BUILDING INSPECTION.
- TREES SHALL NOT BE ACCEPTABLE IF THEIR CENTRAL LEADER HAS BEEN CUT OR IS DAMAGED SO THAT CUTTING IS NECESSARY.
- PLANTS SHALL NOT BE PRUNED PRIOR TO INSTALLATION. ANY NECESSARY PRUNING SHALL BE DONE IMMEDIATELY AFTER THE TIME OF INSTALLATION.
- PLANT HEIGHT SHALL BE MEASURED BEFORE PRUNING WITH BRANCHES IN A NORMAL POSITION. NO PLANT SHALL BE PRUNED BACK TO SUCH AN EXTENT THAT IT NO LONGER MEETS THE REQUIRED SIZE SPECIFICATIONS.
- ALL DECIDUOUS AND EVERGREEN TREES SHALL BE BALLED AND BURLAPPED. NO BARE ROOT TREES SHALL BE ACCEPTABLE.
- THE MINIMUM SIZE OF BALLS, BALL DEPTHS, AND BALL DIAMETERS SHALL BE IN ACCORDANCE WITH RECOMMENDED BALLING AND BURLAPPING SPECIFICATIONS AS SET FORTH IN THE CURRENT EDITION OF THE AMERICAN STANDARDS OF NURSERY STOCK.
- ALL BALLED AND BURLAPPED PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY SHALL BE SEALED IN AND PROTECTED WITH BURLAP OR OTHER ACCEPTED MATERIAL.
- IDEAL TREES SELECTED FOR THIS PROJECT HAVE A STRAIGHT TRUNK, ROUNDED OR OVAL FORM, AND SYMMETRICAL BRANCHING PATTERN.
- ALL TREES AND SHRUBS SHOWN ON THIS DRAWING SHALL BE PLACED IN A MANNER TO ALLOW FOR AMPLE ROOM TO DEVELOP.
- IF WORK IS REQUIRED WITHIN THE EASEMENTS CAUSING REMOVAL OR DAMAGE OF LANDSCAPE MATERIALS, THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR REPLACEMENT OF MATERIALS ACCORDING TO THE APPROVED LANDSCAPE PLAN.
- INSTALLATION OF A WEED BARRIER IS REQUIRED IN ALL MULCHED/LANDSCAPING AREAS.

Landscaping Notes

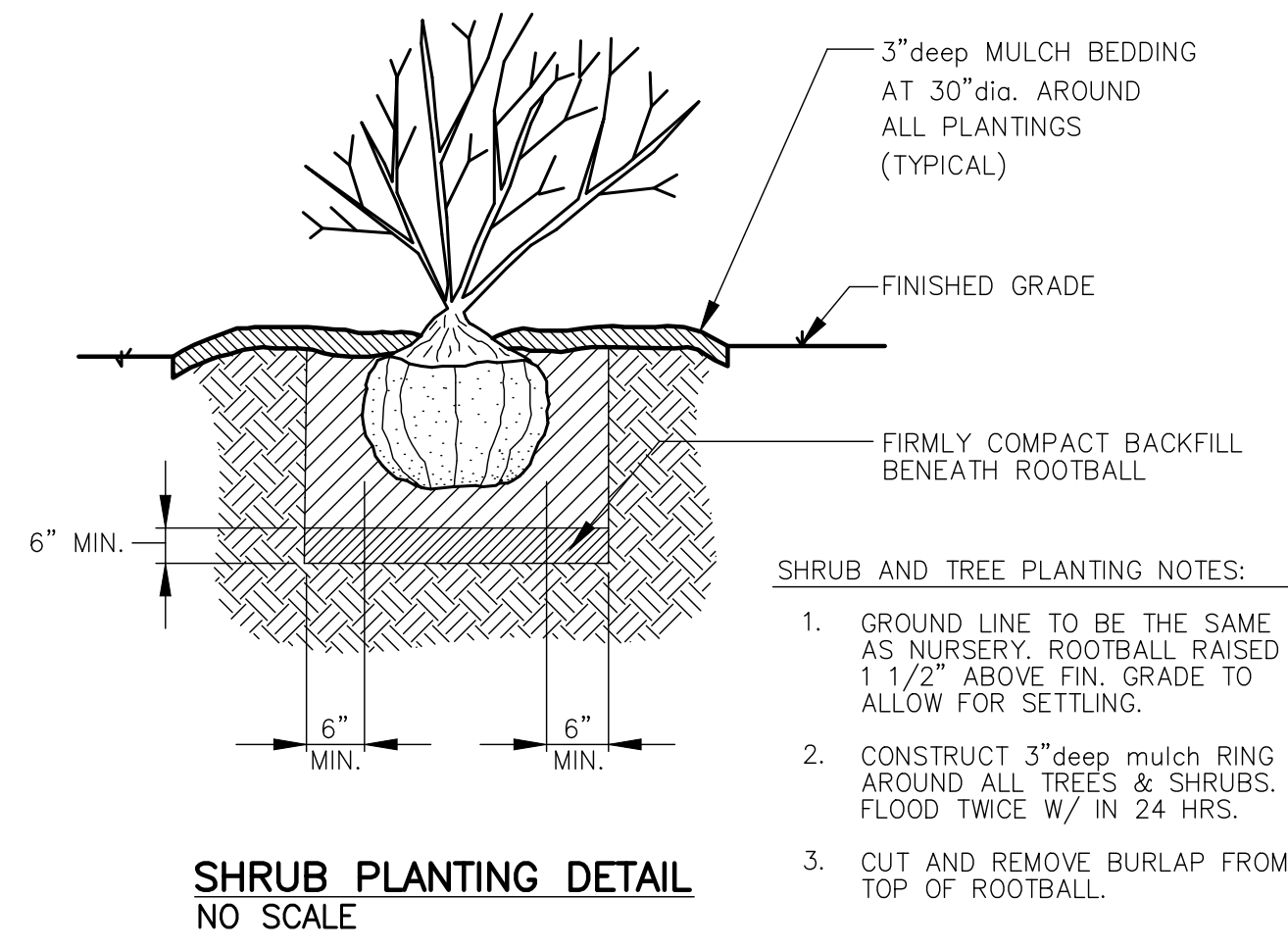
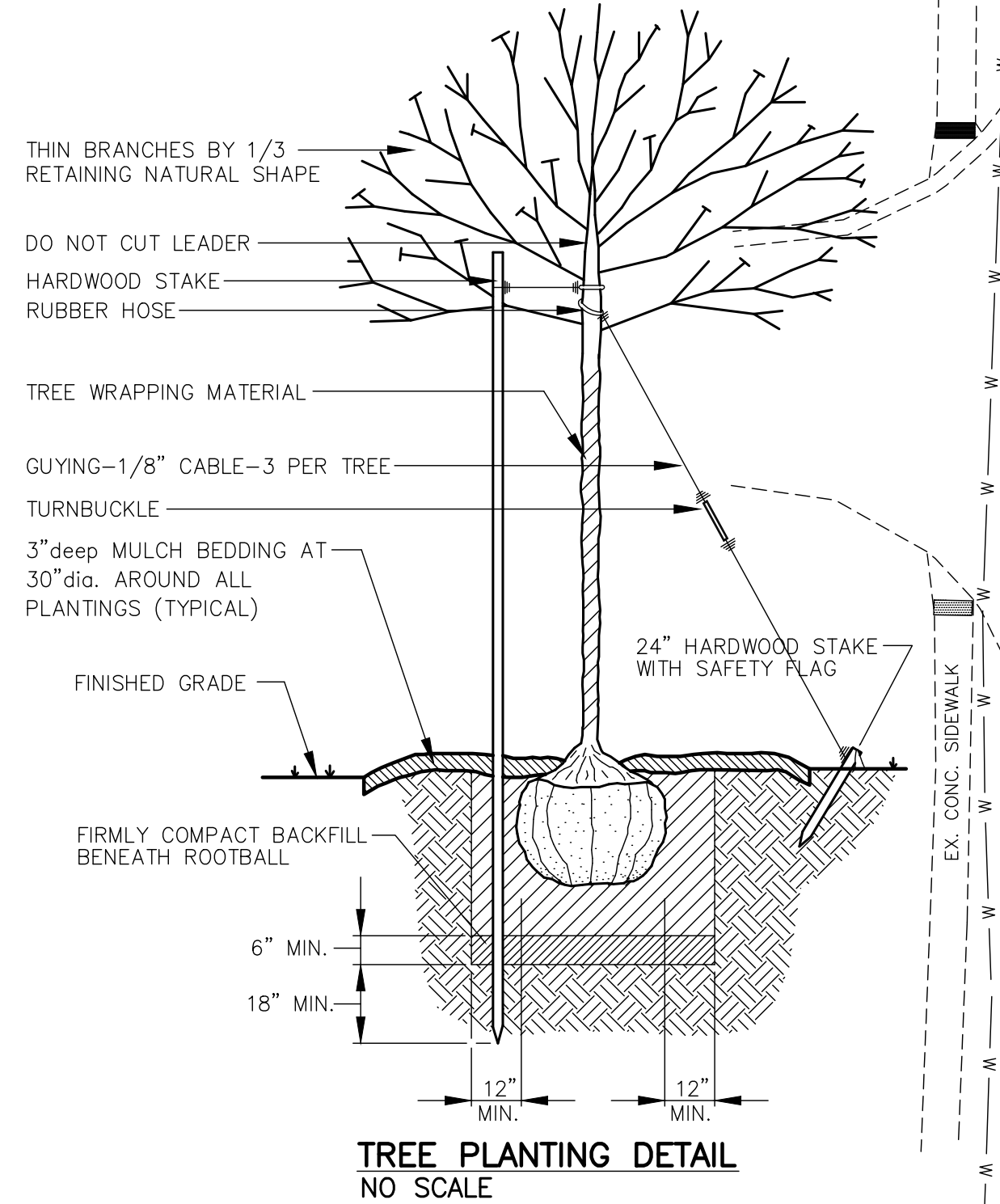
- All plant materials to meet minimum standards set by American Association of Nurserymen, latest published addition of American Standard for Nursery Stock.
- All areas disturbed by construction and not otherwise paved or landscaped and all lawn areas shall be seeded with straw as specified.
- All lawn areas to be raked smooth, fertilized and watered prior to seeding.

% of mix.	Name of grass	Application
39.86%	Falcon IV tall fescue	1.5 #/1,000 sq.ft.
29.80%	Scorpion II tall fescue	1.5 #/1,000 sq.ft.
29.60%	Six point tall fescue	1.5 #/1,000 sq.ft.
00.72%	Inert	1.5 #/1,000 sq.ft.
00.02%	Other weeds	1.5 #/1,000 sq.ft.
- Planting soil for tree and shrub pits to be backfilled with the soil that was removed from the planting pit.

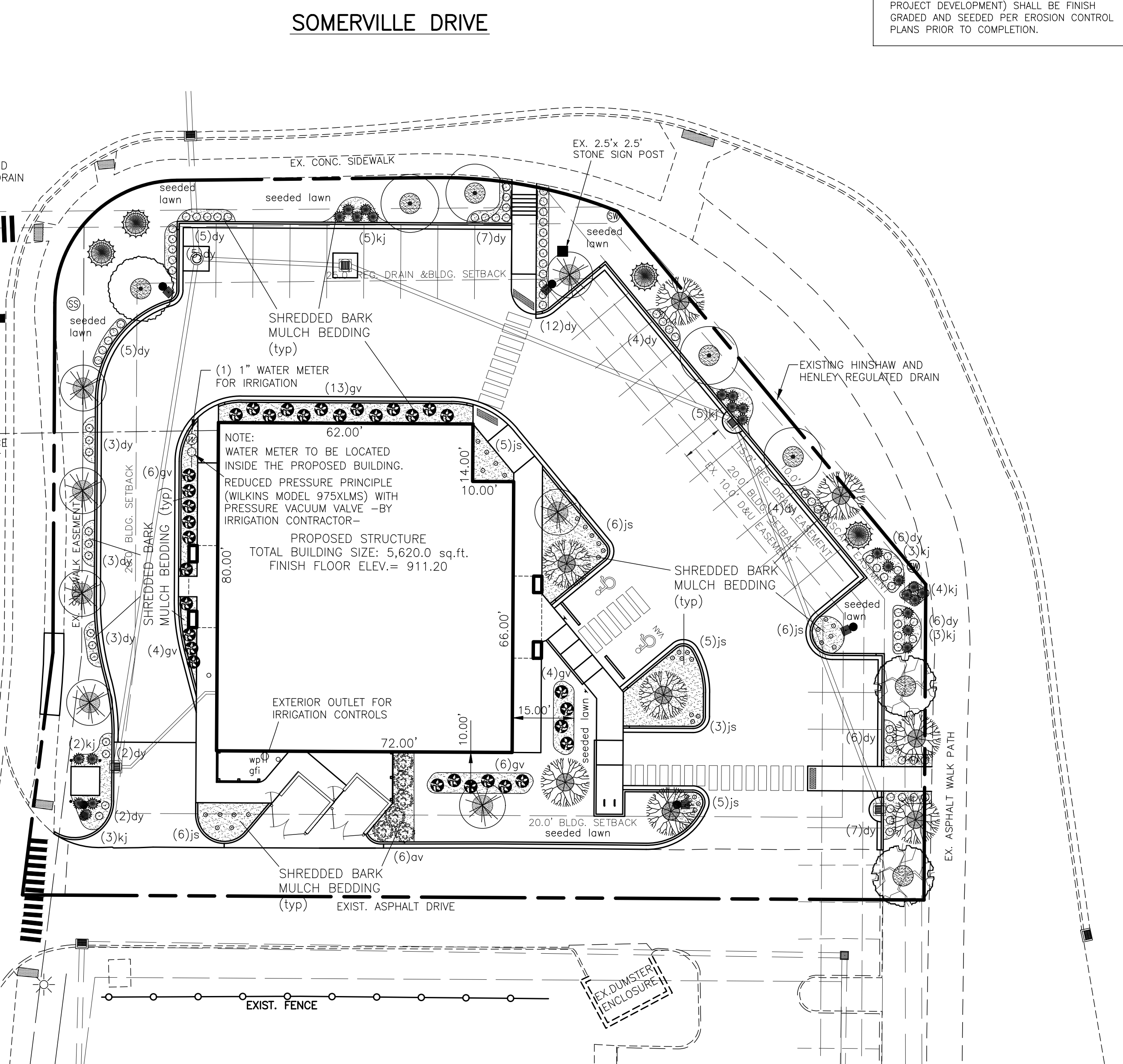
Seasonal Soil Protection Chart

STABILIZATION PRACTICE	SEASONAL SOIL PROTECTION CHART											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING	A											
DORMANT SEEDING	B											
TEMPORARY SEEDING	C, E, D											
SEEDING	F											
MULCHING	G											

- A= KENTUCKY BLUEGRASS 40 LBS/ACRE; CREEPING RED FESCUE 40 LBS/ACRE; PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 20 LBS/ACRE.
 B= KENTUCKY BLUEGRASS 60 LBS/ACRE; CREEPING RED FESCUE 60 LBS/ACRE; PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 30 LBS/ACRE.
 C= SPRING OATS 3BUSH/ACRE.
 D= WHEAT OR RYE 2 BUSH/ACRE.
 E= ANNUAL RYEGRASS 40 LBS/ACRE. (1 LB/1,000 S.F.)
 F= SOD.
 G= STRAW MULCH 2 TONS/ACRE.
 •/1/• = IRRIGATION NEEDED DURING JUNE, JULY AND / OR SEPT.
 •• = IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.



- SHRUB AND TREE PLANTING NOTES:**
- GROUND LINE TO BE THE SAME AS NURSERY. ROOTBALL RAISED 1 1/2" ABOVE FIN. GRADE TO ALLOW FOR SETTLING.
 - CONSTRUCT 3" DEEP MULCH RING AROUND ALL TREES & SHRUBS. FLOOD TWICE W/ IN 24 HRS.
 - CUT AND REMOVE BURLAP FROM TOP OF ROOTBALL.



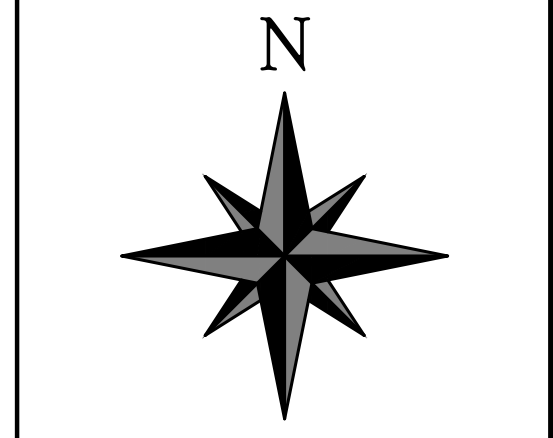
LANDSCAPE LEGEND:

- SHADE TREES: BOTANICAL NAME: QUERCUS RUBRA, COMMON NAME: RED OAK, CALIPER: 1 1/2" (single stem), QUANTITY: 01, 5.0' dia. MULCH BEDDING
- SHADE TREES: BOTANICAL NAME: ARONIA MELANOCARPA, COMMON NAME: CHOKEBERRY, CALIPER: 1 1/2" (single stem), QUANTITY: 04, 5.0' dia. MULCH BEDDING
- SHADE TREES: BOTANICAL NAME: ACER RUBRUM 'ARMSTRONG', COMMON NAME: 'ARMSTRONG' RED MAPLE, CALIPER: 1 1/2" (single stem), QUANTITY: 02, 5.0' dia. MULCH BEDDING
- SHADE TREES: BOTANICAL NAME: PICEA ABIES, COMMON NAME: NORWAY SPRUCE, CALIPER: 1 1/2" (single stem), QUANTITY: 04, 5.0' dia. MULCH BEDDING
- ORNAMENTAL TREES: BOTANICAL NAME: CERCIIS CANADENSIS, COMMON NAME: EASTERN REDBUD, CALIPER: 1 1/2" (single stem), QUANTITY: 07, 5.0' dia. MULCH BEDDING
- ORNAMENTAL TREES: BOTANICAL NAME: TILIA CORDATA, COMMON NAME: LITTLE LEAF LINDEN, CALIPER: 1 1/2" (single stem), QUANTITY: 08, 5.0' dia. MULCH BEDDING
- EVERGREEN SHRUB: BOTANICAL NAME: THUJA OCCIDENTALIS, COMMON NAME: EMERALD GREEN ARBORVITAE, HEIGHT AT PLANTING: 36" (MIN), QUANTITY: 6, (MATURE HT. = 10.0' to 12.0'tall)
- DECIDUOUS SHRUB: BOTANICAL NAME: BUXUS X 'GREEN VELVET', COMMON NAME: GREEN VELVET BOXWOOD, SIZE AT PLANTING: 18 (MIN), QUANTITY: 30, (MATURE HT. = 2'-0" to 3'-0" tall)
- EVERGREEN SHRUB: BOTANICAL NAME: TAXUS X MEDIA 'DENSIFORMIS', COMMON NAME: DENSE YEW, HEIGHT AT PLANTING: 15" (MIN), QUANTITY: 80, (MATURE HT. = 15" to 18" tall)
- EVERGREEN SHRUB: BOTANICAL NAME: JUNIPERUS X PFITZERIANA, COMMON NAME: KALLAY JUNIPER, HEIGHT AT PLANTING: 18" (MIN), QUANTITY: 25, (MATURE HT. = 36" tall)
- DECIDUOUS SHRUB: BOTANICAL NAME: HYLOLEPHIUM SPECTABILE, COMMON NAME: AUTUMN JOY SEDUM, HEIGHT AT PLANTING: 15" (MIN), QUANTITY: 36, (MATURE HT. = 30" tall)

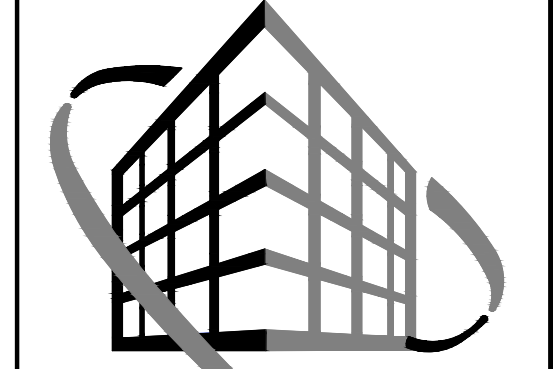
SITE LANDSCAPING PLAN
SCALE: 1" = 20.0"



UTILITY DISCLAIMER
EXISTING UNDERGROUND INSTALLATIONS SUCH AS WATER MAINS, GAS MAINS, SEWERS, TELEPHONE LINES, AND BURIED STRUCTURES IN THE VICINITY OF THE WORK TO BE DONE HEREUNDER ARE INDICATED ON THE DRAWINGS ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE SURVEYOR IN PREPARING THIS DRAWING. THERE IS NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION, AND ALL RESPONSIBILITY FOR ACCURACY AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED.



REVISION	DATE	DESCRIPTION
10/10/2022	revised per city comments	
10/18/2022	revised per city comments	
11/01/2022	revised per city comments	



VERSATILE CONSTRUCTION GROUP, LLC.
570 East Troy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
1335 S. Waterleaf Drive
Westfield, Indiana 46074
Site Landscaping Plan

Job No.: 21068	Date Stamped: 08/15/2022
Drawn By: caw	Checked By: tab
Scale: 1" = 20.0'	

CAD FILE: G:\21068\c210 site landscaping plan.dwg



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SHEET TITLE: **C210**

UTILITY CONSTRUCTION NOTES:

1. Site Contractor shall have approval of all governing agencies having jurisdiction over these systems prior to any installations.
2. The Sanitary Sewer pipe material shall be pvc unless otherwise noted. All pipes shall meet the ASTM 3034 with the wall thickness equal to SDR 35. The pipe shall be joined with rubber ring gaskets as specified in ASTM 3034 and shall be installed in accordance with ASTM 2321. Furthermore the pipe material cell classification shall be 12454B as per ASTM 1784.
3. All trenching, pipe laying, and backfilling shall be in accordance with all federal OSHA regulations.
4. Site contractor shall be responsible for repairs to any existing utilities damaged during construction.
5. The contractor shall refer to the Architect's plans and specifications for the actual location of all utility entrances to include sanitary sewer laterals, domestic and fire protection water services, electrical, telephone, and gas services. The contractor shall coordinate installation of utilities in such a manner as to avoid conflicts and assure proper depths are achieved, as well as coordinating with the regulatory agency as to the location and scheduling of all tie-ins/connections to said services.
6. All vertical bends on the proposed water mains shall be restrained with a mechanical joint fittings supplied with retainer glands. Any joints 25 feet or less from either side of the vertical bends shall be restrained with a retainer gland.
7. All dimensions shown here are to centerline of pipe, fitting, or structure.
8. All valves shall be installed in a cast iron valve box with cover.
9. Thrust blocking shall be provided at all horizontal bends, tees, and fire hydrants.
10. The minimum cover depths of all water line/mains shall be 54" deep.
11. All gate valves 3/4" through 3" shall be bronze 'wedge' type gate valves. All valves shall have non-rising stems with solid tee head operating nut.
12. All pipes 3" in diameter and smaller shall be type K copper. All fittings shall be copper or cast bronze. All joints shall be solder or flare type joints.
13. The minimum horizontal separation between the closest two points of the water service and sanitary sewer service lines is to be ten feet (10'). The minimum vertical separation between the closest two points of the water service and sanitary sewer service lines is twenty-four inches (24").
14. All water mains shall be hydrostatically tested and disinfected before acceptance, as per AWWA standard specifications.
15. All utility crossings under existing pavement shall be bore / jock and bore to avoid open cuts per the city of Westfield.

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION (TICKET No. 2204121034) AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, AND SANITARY SEWER. ANY CONFLICTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND THE APPROPRIATE AUTHORITIES.

WATER SERVICE NOTE:

1. ALL WATER LINES INCLUDED IN THIS PROJECT SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. ALL NEWLY INSTALLED WATER LINES SHALL MEET OR EXCEED THE STANDARDS FOR PUBLIC UTILITIES AND SHALL BE TESTED PER THE CITY OF WESTFIELD AND HAMILTON COUNTY TESTING SPECIFICATIONS.
3. ALL NEWLY INSTALLED WATER METERS SHALL BE OBTAINED FROM THE LOCAL WATER COMPANY.
4. ALL WATER SERVICE PIPING SHALL HAVE WARNING TAPE AND (3) STRANDS OF 10ga. (INSULATED) COPPER LOCATOR WIRE (typical)

SANITARY SEWER NOTES:

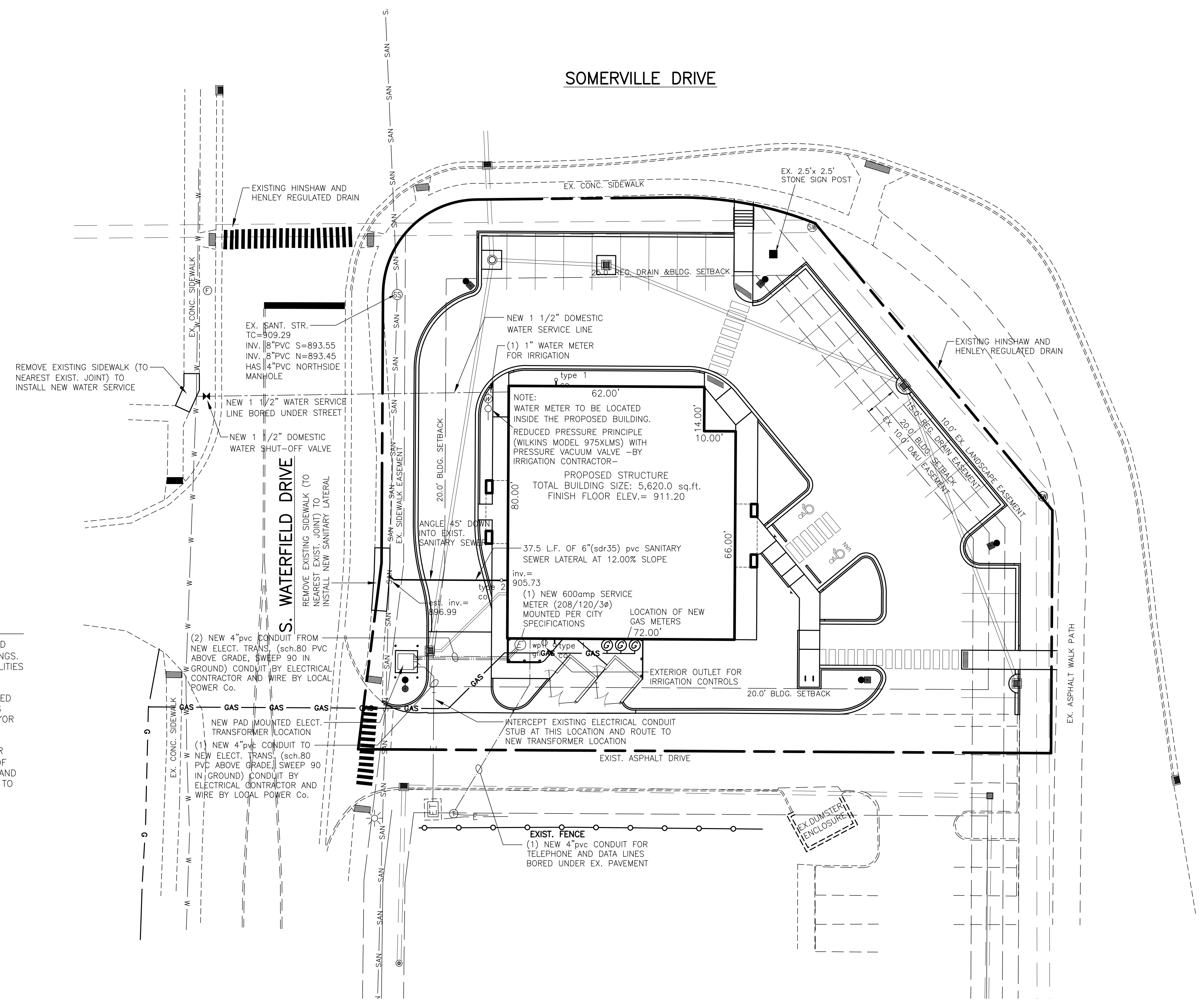
1. ALL SANITARY SEWERS INCLUDED IN THIS PROJECT SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. ALL NEWLY INSTALLED SANITARY SEWERS SHALL MEET OR EXCEED THE STANDARDS FOR THE PUBLIC SEWERS AND SHALL BE TESTED PER THE CITY OF WESTFIELD AND HAMILTON COUNTY TESTING SPECIFICATIONS.
3. ALL SANITARY SEWER LATERAL PIPING SHALL HAVE WARNING TAPE AND (3) STRANDS OF 10ga. (INSULATED) COPPER LOCATOR WIRE (typical)

ELECTRICAL NOTE:

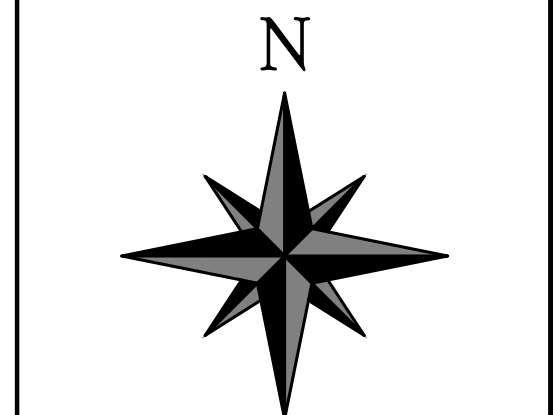
TOP OF ALL NEW ELECTRICAL SERVICE CONDUITS SHALL BE INSTALLED AT A MINIMUM OF 36" BELOW FINISH GRADE.

LEGEND:

— W — W —	EXISTING WATER SERVICE LINE	-----	PROPOSED WATER SERVICE LINE
— SAN — SAN —	EXISTING SANITARY SEWER SERVICE LINE	-----	PROPOSED SANITARY SEWER SERVICE LINE
⊙	EXISTING SANITARY SEWER MANHOLE	type *	NEW SANITARY SEWER CLEANOUTS (SEE AQUA INDIANA'S DETAIL SHEETS)
— T —	EXISTING UNDERGROUND TELEPHONE LINE	— E —	PROPOSED UNDERGROUND ELECTRICAL LINE
— G —	EXISTING GAS LINES	— E —	PROPOSED ELECTRICAL METERS
— E —	EXISTING UNDERGROUND ELECTRICAL LINE	— GAS — GAS —	PROPOSED UNDERGROUND FIBER OPTIC COMMUNICATION LINE
==	EXISTING STORM SEWER LINES	— GAS — GAS —	PROPOSED GAS LINES
■	EXISTING STORM SEWER CURB INLET	⊙	PROPOSED GAS METERS
		—	PROPOSED STORM SEWER PIPES



SITE UTILITY PLAN
SCALE: 1" = 20.0'



REVISION	DATE	DESCRIPTION
10/10/2022	revised per city comments	
10/18/2022	revised per city comments	



VERSATILE CONSTRUCTION GROUP, LLC.

570 East Troy Road, Suite 610
New Westfield, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
1335 S. Waterleaf Drive
Westfield, Indiana 46074

Site Utility Plan

Job No.:	Date Stamped:
21068	08/15/2022
Drawn By:	Checked By:
caw	tab
Scale: 1" = 20.0'	

CAD FILE:
c:\21068\c300 site utility plan.dwg



Trent A. Baxter
CERTIFIED BY:

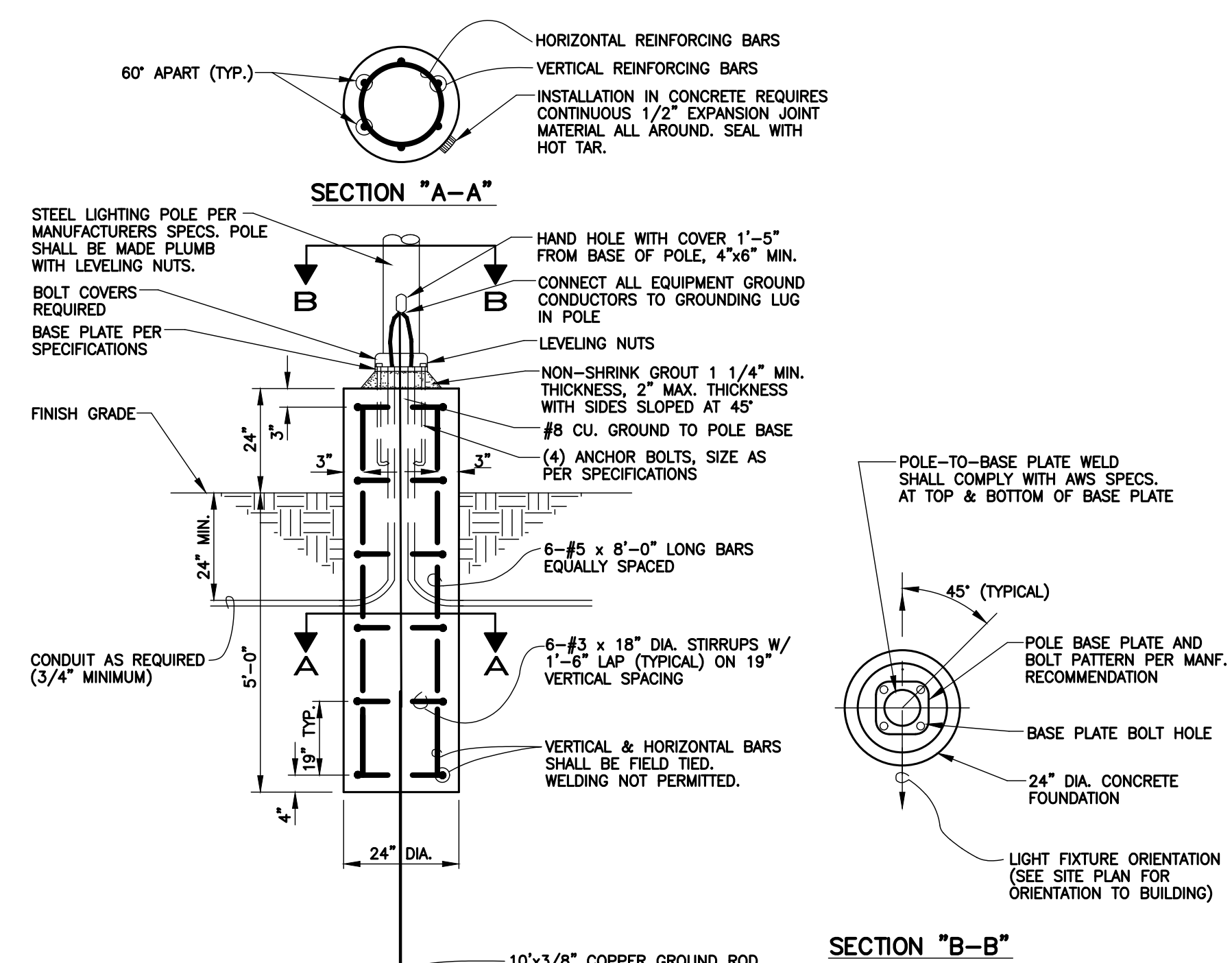
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SHEET TITLE:
C300



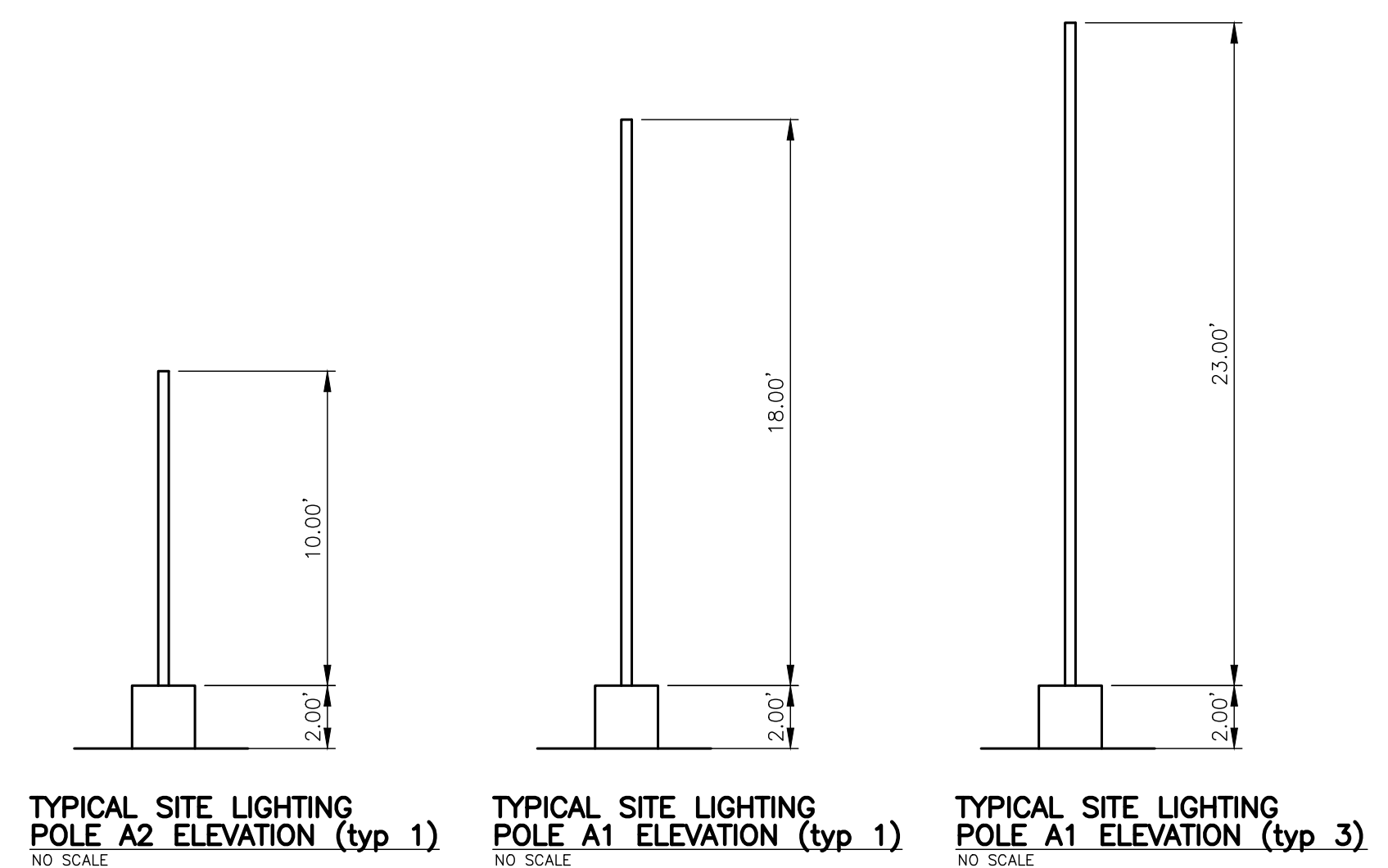
UTILITY DISCLAIMER

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- NOTES:**
- 3500 P.S.I. MIN. 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REIN. STEEL.
 - IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
 - EXPOSED CONCRETE AND GROUT SHALL BE PAINTED TRAFFIC YELLOW BY THE PAVEMENT STRIPING CONTRACTOR.
 - FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
 - ALL WIRING SHALL BE COPPER LAID IN PVC CONDUIT.

TYPICAL LIGHT POLE FOUNDATION DETAILS
NO SCALE



TYPICAL SITE LIGHTING POLE A2 ELEVATION (typ 1)
NO SCALE

TYPICAL SITE LIGHTING POLE A1 ELEVATION (typ 1)
NO SCALE

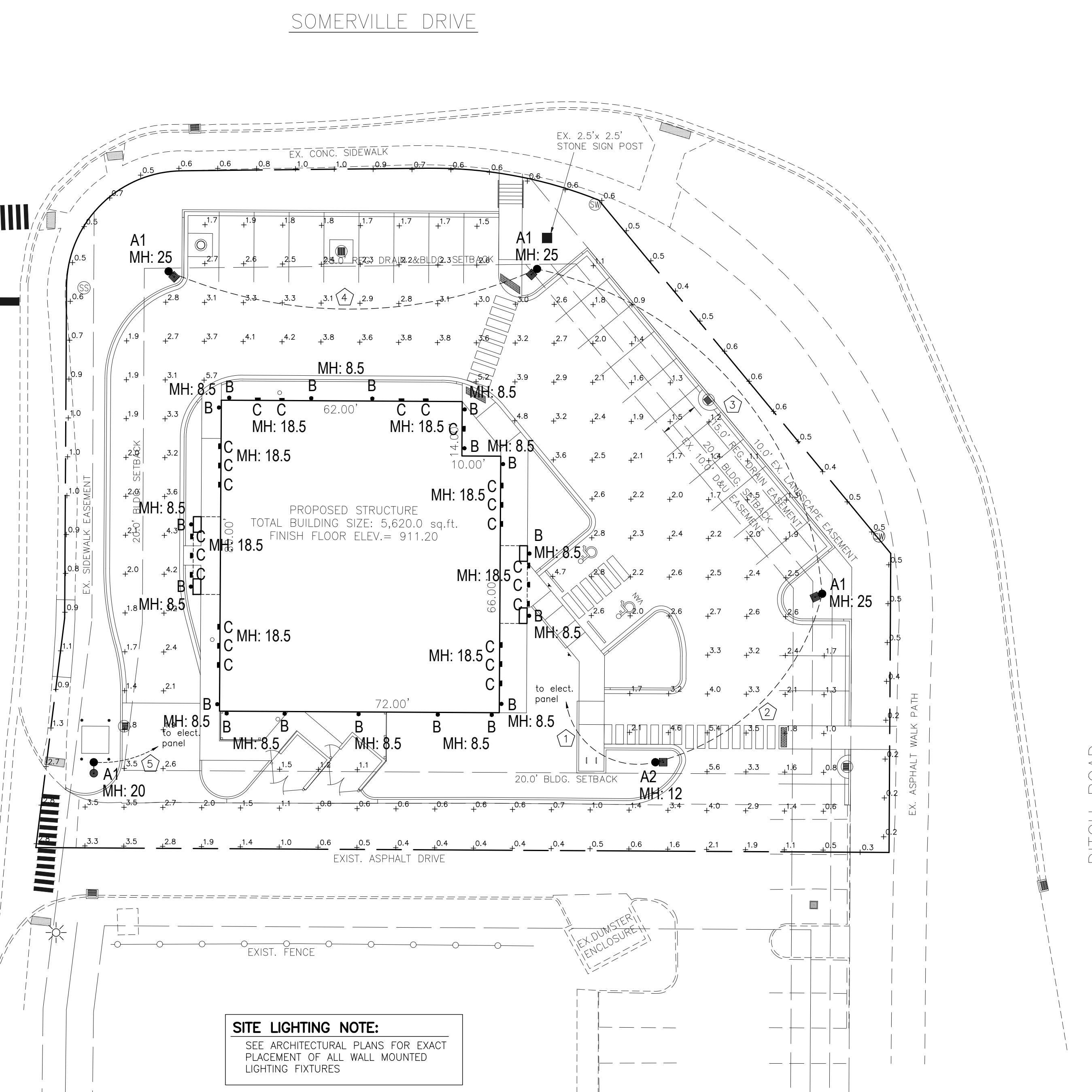
TYPICAL SITE LIGHTING POLE A1 ELEVATION (typ 3)
NO SCALE

Luminaire Schedule								
Project: 20220239-TB HARMONY POINTE - SITE LIGHTING								
Symbol	Qty	Label	Arrangement	Lum. Watts	Lum. Lumens	LLF	Manufacturer	Description
●	4	A1	Single	88.2	12948	0.900	ILP	SAS-12L-U-40-T4
●	1	A2	Single	44.2	6474	0.900	ILP	SAS-6L-U-40-T4
●	19	B	Single	16.15	2026	0.850	HILIT	H-24212-123/HL-A-123/DWG/SGU-FR/INC (GC 15A21DIM 940N)
●	23	C	Single	16.15	2026	0.850	HILIT	H-18112-123/HL-C-123/SGU-FR/INC (GC 15A21DIM 940N)

CALCULATIONS ARE MAINTAINED HORIZONTAL ILLUMINANCE FIGURES IN FOOT-CANDLES POINTS SHOWN ARE AT GRADE; UNLESS NOTED OTHERWISE UNDER CALCULATION SUMMARY FIXTURE MOUNTING HEIGHTS ARE SPECIFIED NEXT TO FIXTURES AS "MH"

Calculation Summary							
Project: 20220239-TB HARMONY POINTE - SITE LIGHTING							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
BUILDING SIGNAGE @ Vertical Surface	Illuminance	Fc	10.75	22.9	3.6	2.99	6.36
PERIMETER @ Grade	Illuminance	Fc	0.28	6.9	0.0	N.A.	N.A.
PROPERTY LINE @ Grade	Illuminance	Fc	0.60	1.3	0.1	6.00	13.00
PARKING LOT @ Grade	Illuminance	Fc	1.77	4.7	0.1	17.70	47.00

THE FIXTURE TYPE(S) AND LAMPING(S) SPECIFIED ON THIS LAYOUT MUST BE USED IN ORDER TO MEET THE EXACT CRITERIA AND PERFORMANCE DATA SHOWN. IES RECOMMENDED ILLUMINANCE TARGETS USED WHERE APPLICABLE.



SITE LIGHTING NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT PLACEMENT OF ALL WALL MOUNTED LIGHTING FIXTURES

SITE LIGHTING WIRING INFORMATION:

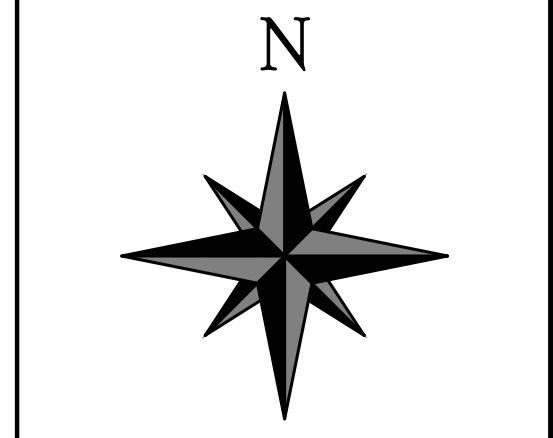
- ① (1) 1" pvc CONDUIT WITH (2) No.8cu FEEDERS (hp 5-7) (1) No.8cu GROUND
- ② (1) 1" pvc CONDUIT WITH (2) No.8cu FEEDERS (hp 5-7) (1) No.8cu GROUND
- ③ (1) 1" pvc CONDUIT WITH (2) No.10cu FEEDERS (hp 5-7) (1) No.10cu GROUND
- ④ (1) 1" pvc CONDUIT WITH (2) No.10cu FEEDERS (hp 5-7) (1) No.10cu GROUND
- ⑤ (1) 1" pvc CONDUIT WITH (2) No.12cu FEEDERS (hp 5-7) (1) No.12cu GROUND

SITE PHOTOMETRIC PLAN
SCALE: 1" = 20.0'



UTILITY DISCLAIMER

EXISTING UNDERGROUND INSTALLATIONS SUCH AS WATER MAINS, GAS MAINS, SEWERS, TELEPHONE LINES, AND BURIED STRUCTURES IN THE VICINITY OF THE WORK TO BE DONE HEREUNDER ARE INDICATED ON THE DRAWINGS ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE SURVEYOR IN PREPARING THIS DRAWING. THERE IS NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION, AND ALL RESPONSIBILITY FOR ACCURACY AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED.



REVISION	DATE	DESCRIPTION
	10/10/2022	revised per city comments
	10/18/2022	revised per city comments
	12/01/2022	revised pole lighting location & quantity



VERSATILE CONSTRUCTION GROUP, LLC.

570 East Troy Road, Suite 610
New Whiteland, Indiana 46154
Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
1335 S. Waterleaf Drive
Westfield, Indiana 46074

Site Photometric Plan

Job No.:	21068	Date Stamped:	08/15/2022
Drawn By:	caw	Checked By:	tab
CAD FILE:		Scale: 1" = 20.0'	



CERTIFIED BY:
Trent A. Baxter

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SHEET TITLE:
C310

BENCHMARK INFORMATION:

ELEVATION WAS ESTABLISHED USING INCORS GPS CONTINUOUSLY OPERATING REFERENCE STATION INMT (INDIANPOLIS CORS ARP.) AS REFERENCED ON NGS DATA SHEETS.
 ERROR +/- 0.13 FOOT AND USING AS-BUILT DRAWINGS FROM H. GIBSON SURVEY DATED: 09/12/2019

FLOOD INFORMATION:

THE PARCEL DESCRIBED AND SHOWN HEREIN LIES WITHIN ZONE "X" AS SAID PARCEL PLOTS ON MAP NUMBER 18057C0120G (DATED NOVEMBER 19, 2014) OF THE FLOOD INSURANCE RATE MAPS FOR WESTFIELD, CITY OF, HAMILTON INDIANA. THE ACCURACY OF THIS FLOOD HAZARD STATEMENT IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP.

EROSION CONTROL INFORMATION:

SEE SITE EROSION CONTROL PLAN FOR LOCATIONS AND INSTALLATION OF ALL EROSION CONTROL MEASURES REQUIRED ON THIS SITE.

STORM DRAINAGE AND GRADING NOTES

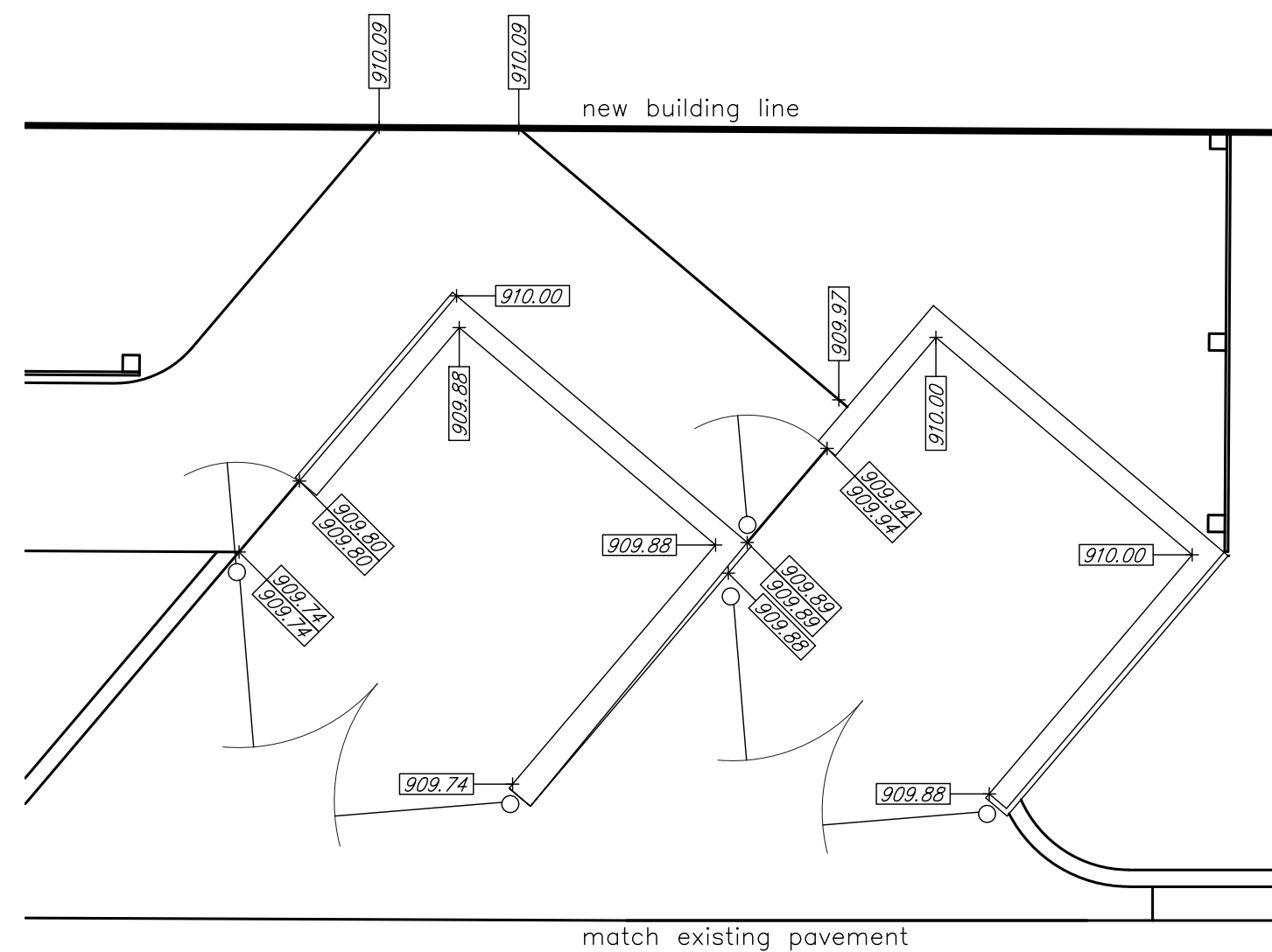
1. ALL NECESSARY PERMITS AND APPROVALS FROM AGENCIES GOVERNING THIS WORK SHALL BE SECURED PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS AND REPLACE ALL PINS ELIMINATED OR DAMAGED DURING CONSTRUCTION.
3. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
4. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OF CENTERLINE OF STRUCTURE.
5. GRADES SHOWN ARE FINISHED GRADES. FOR BUILDING SUB-GRADE ELEVATIONS REFER TO ARCHITECTURAL PLANS.
6. ALL DIMENSIONS OR COORDINATES SHOWN TO BUILDING ARE TO OUTSIDE.
7. EXISTING UTILITY LINES SHOWN ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LINE LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY DEVIATIONS FROM THE DESIGN LOCATIONS SHALL BE REPORTED TO THE OWNER OR ENGINEER.
8. THE SITE WORK CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL UNDERGROUND UTILITIES WITH HIS WORK. ALL UNDERGROUND UTILITIES (WATER, SANITARY SEWER, STORM SEWER, ELECTRICAL CONDUIT, IRRIGATION SLEEVES, AND ANY OTHER MISCELLANEOUS), SHALL BE IN-PLACE PRIOR TO THE PLACEMENT OF BASE COURSE.
9. ALL FILL AREAS TO BE COMPACTED CLAY ROLLED IN WITH A SHEEPS FOOT ROLLER IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR. VERIFICATION OF THE COMPACTION SHALL BE DONE BY AN INDEPENDENT SOILS TESTING COMPANY AND ALL TEST RESULTS SUBMITTED TO THE ENGINEER.

SITE INFRASTRUCTURE SUMMARY INFORMATION:

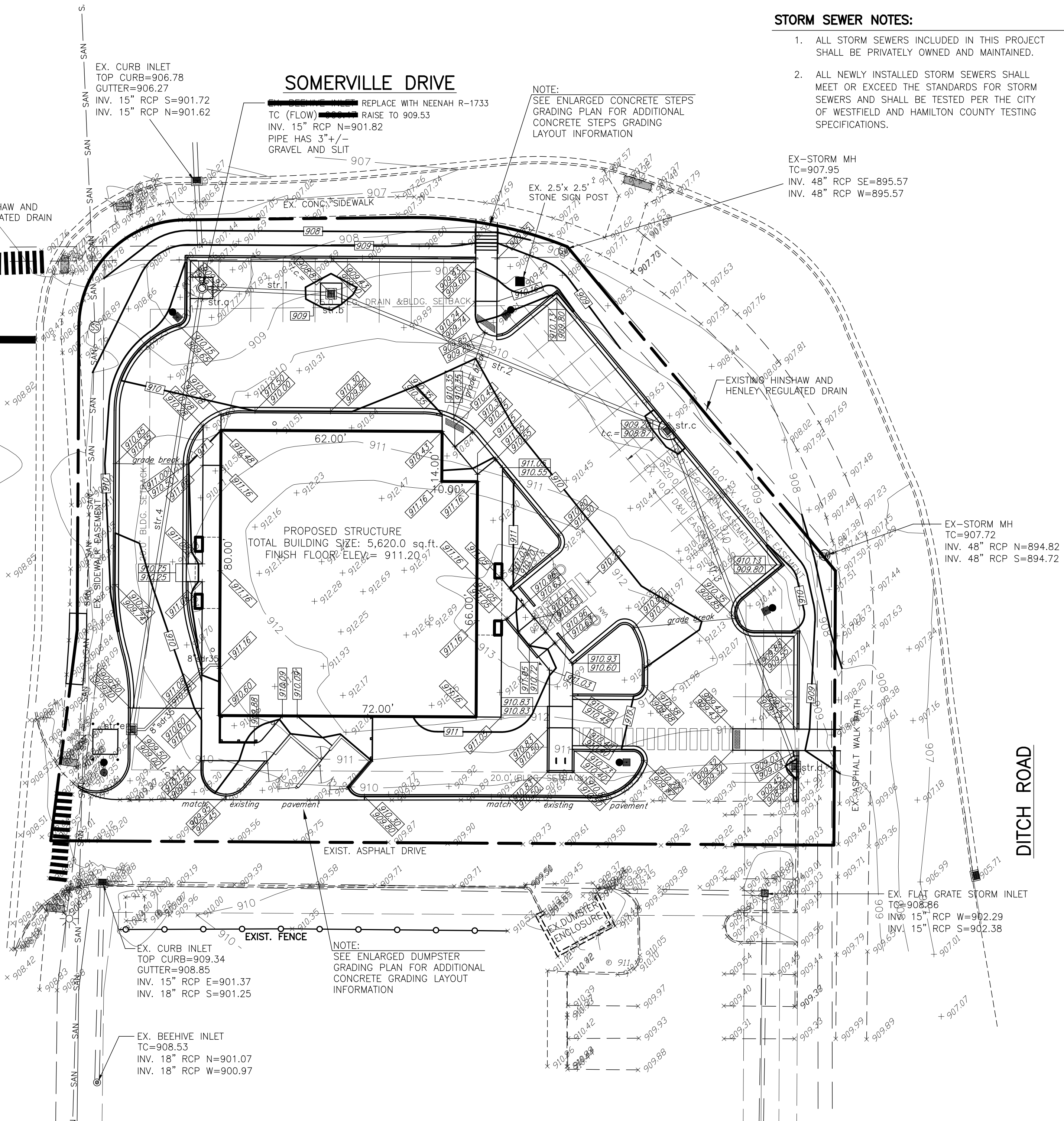
INLET/MANHOLE STRUCTURE

- STRUCTURE a
 EXISTING PRECAST CONCRETE STORM MANHOLE
 EXISTING CASTING: BEEHIVE
 REPLACE CASTING: NEENAH R-1733
 EX. T.C.= 906.47
 RAISE TO T.C.= 909.53
 INV. IN SE 12"rcp= 903.77
 INV. IN SW 12"rcp= 904.62
 EXIST. INV. OUT N 15"rcp= 901.82
- STRUCTURE b
 NEW 2.0'sq. PRECAST CONCRETE STORM INLET
 (CASTING: NEENAH R-3286-8V)
 T.C.= 908.87
 INV. IN SE 12"rcp= 904.06
 INV. OUT NW 12"rcp= 903.96
- STRUCTURE c
 NEW 2.0'sq. PRECAST CONCRETE STORM INLET
 (CASTING: NEENAH R-3286-8V)
 T.C.= 908.87
 INV. IN SE 12"rcp= 904.69
 INV. OUT NW 12"rcp= 904.59
- STRUCTURE d
 NEW 2.0'sq. PRECAST CONCRETE STORM INLET
 (CASTING: NEENAH R-3286-8V)
 T.C.= 908.95
 INV. OUT NW 12"rcp= 905.20
- STRUCTURE e
 NEW 2.0'sq. PRECAST CONCRETE STORM INLET
 (CASTING: NEENAH R-3286-8V)
 T.C.= 909.00
 INV. IN W 8"sdr35= 905.50
 INV. OUT NE 12"rcp= 905.25

- PIPE STRUCTURES**
- NEW STRUCTURE 1
 36.2 L.F. OF NEW 12"rcp AT 0.52% SLOPE
 - NEW STRUCTURE 2
 101.9 L.F. OF NEW 12"rcp AT 0.52% SLOPE
 - NEW STRUCTURE 3
 101.3 L.F. OF NEW 12"rcp AT 0.50% SLOPE
 - NEW STRUCTURE 4
 125.4 L.F. OF NEW 12"rcp AT 0.50% SLOPE



ENLARGED DUMPSTER GRADING PLAN
 SCALE: 1"= 5.0'



STORM SEWER NOTES:

1. ALL STORM SEWERS INCLUDED IN THIS PROJECT SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. ALL NEWLY INSTALLED STORM SEWERS SHALL MEET OR EXCEED THE STANDARDS FOR STORM SEWERS AND SHALL BE TESTED PER THE CITY OF WESTFIELD AND HAMILTON COUNTY TESTING SPECIFICATIONS.

LEGEND:

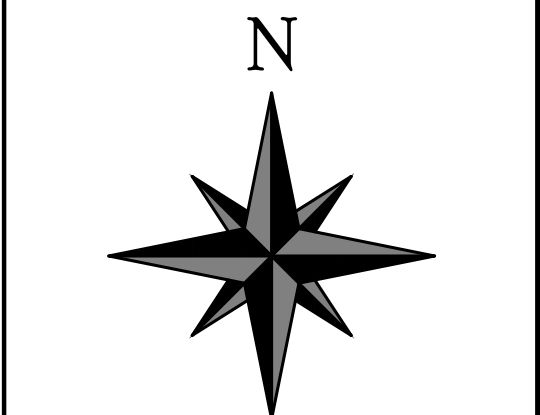
- + 910.45 EXISTING SPOT ELEVATION
- 910 EXISTING CONTOURS LINES
- EXISTING STORM SEWER CURB INLETS
- EXISTING STORM SEWER LINES
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOURS LINES
- PROPOSED STORM SEWER PIPES
- PROPOSED STORM SEWER MANHOLES AND INLETS

SITE GRADING PLAN
 SCALE: 1"= 20.0'

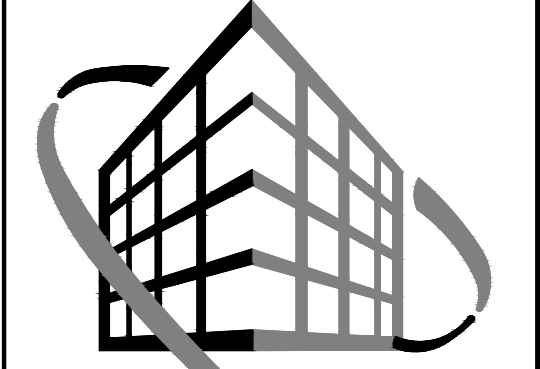


UTILITY DISCLAIMER

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REVISION	DATE	DESCRIPTION
10/10/2022	revised per city comments	
10/18/2022	revised per city comments	
12/01/2022	revised storm sewer placement & inverts	



VERSATILE CONSTRUCTION GROUP, LLC.

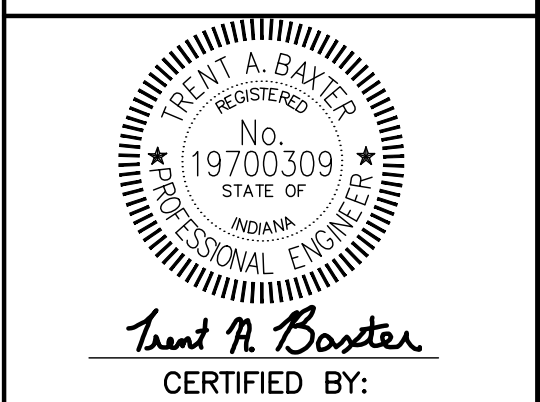
570 East Troy Road, Suite 610
 New Whiteland, Indiana 46154
 Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
 1335 S. Waterleaf Drive
 Westfield, Indiana 46074

Site Grading Plan

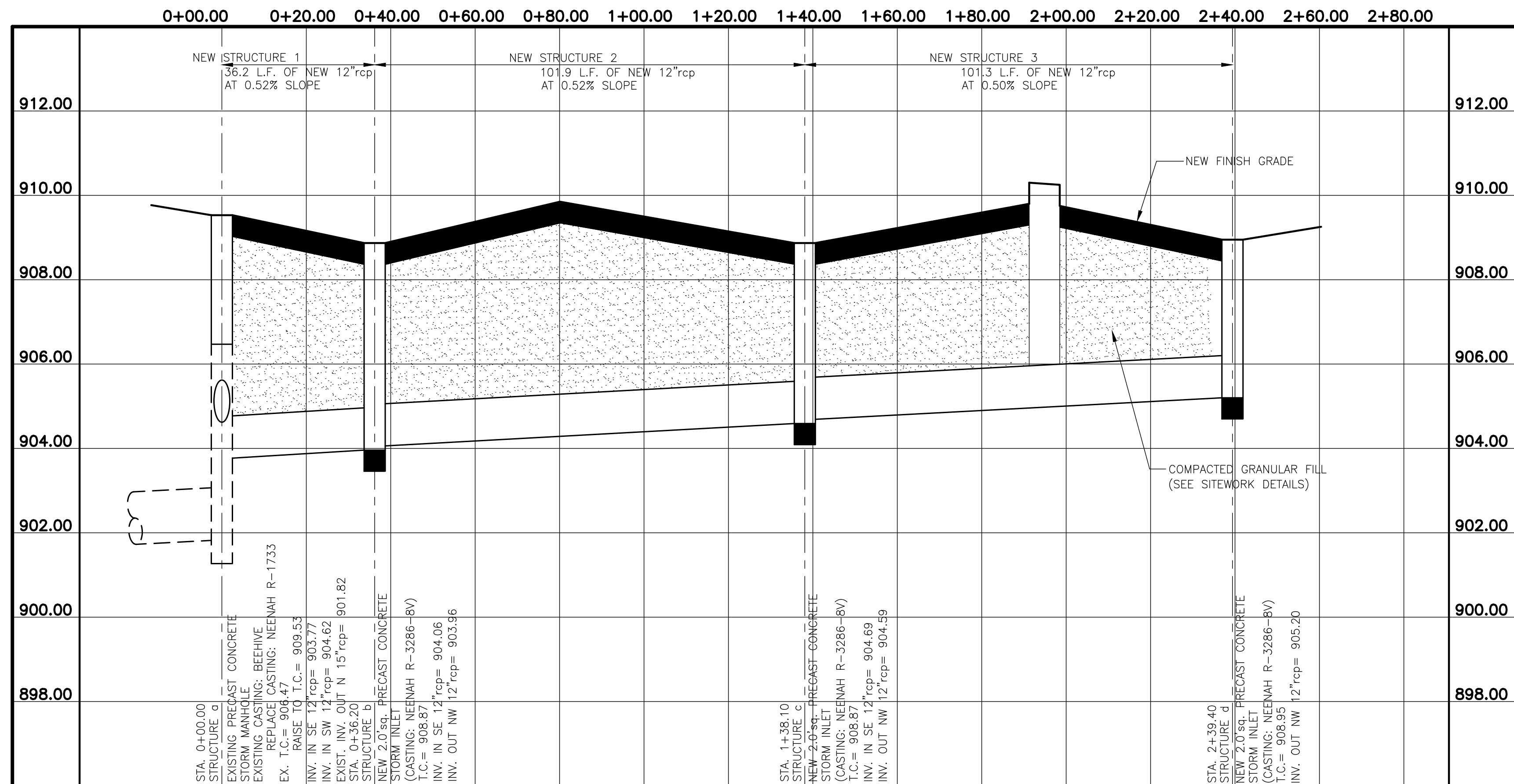
Job No.: 21068	Date Stamped: 08/15/2022
Drawn By: caw	Checked By: tab
Scale: 1"= 20.0'	

CAD FILE: c:\21068\c400 site grading plan.dwg

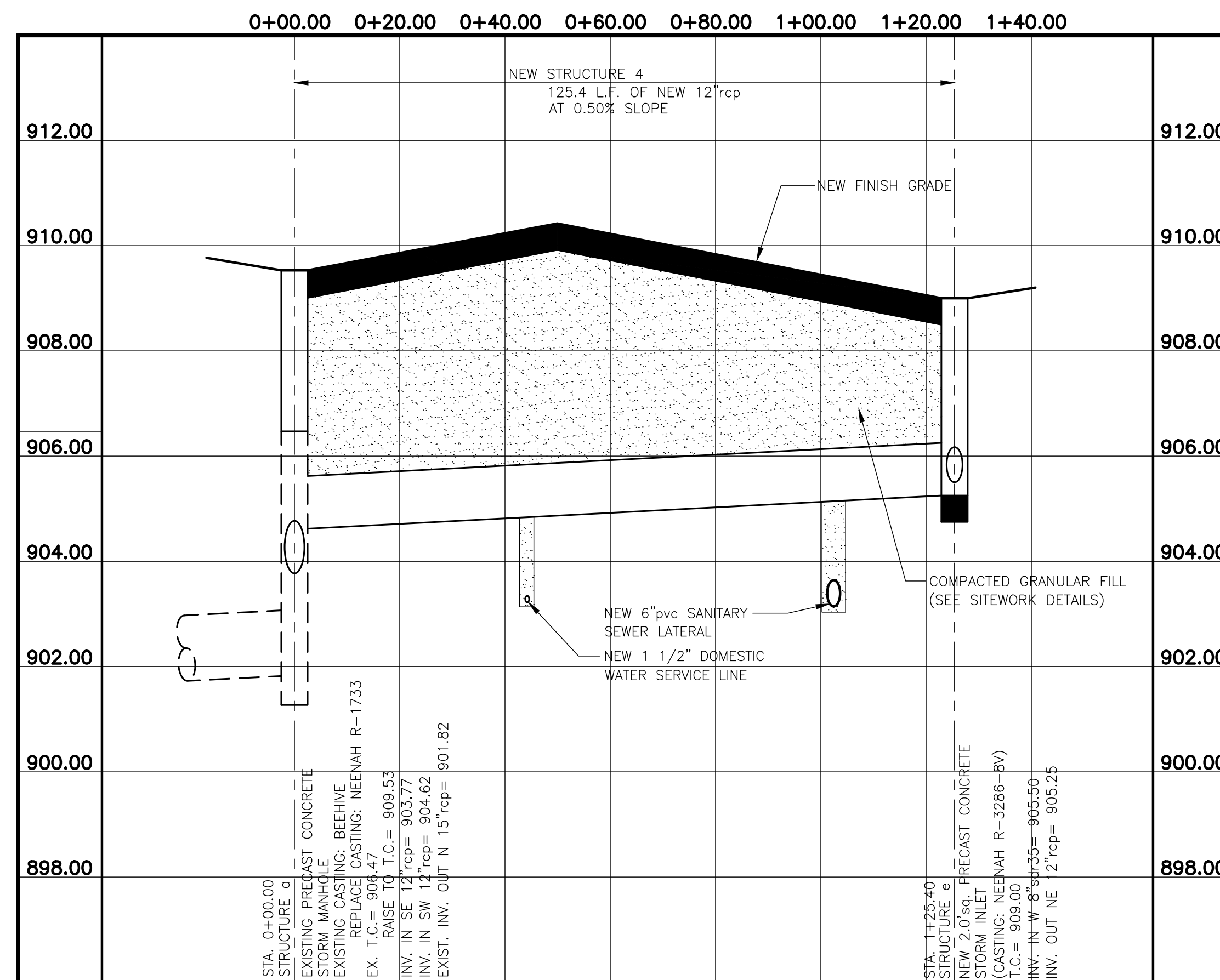


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SHEET TITLE:
C400



STORM SEWER PROFILE STRUCTURE No. a thru d
SCALE: 1" = 20.0' (HORIZ.)
SCALE: 1" = 2.0' (VERTICAL)



STORM SEWER PROFILE STRUCTURE No. a and e
SCALE: 1" = 20.0' (HORIZ.)
SCALE: 1" = 2.0' (VERTICAL)

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12/01/2022	revised storm sewer placement & inverts	



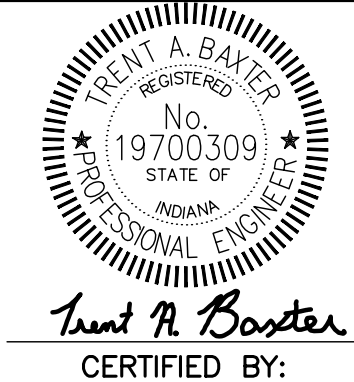
VERSATILE
CONSTRUCTION
GROUP, LLC.

570 East Troy Road, Suite #10
New Palestine, Indiana 46154
Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
1333 S. Waterleaf Drive
Westfield, Indiana 46074
Storm Sewer Profiles Plan

Job No.:	Date Stamped:	
21068	08/15/2022	
Drawn By:	Checked By:	Scale:
caw	tab	1" = 20.0'

CAD FILE:
G:\21068\c410 storm sewer profile plan.dwg



Trent A. Baxter
CERTIFIED BY:

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SHEET TITLE:

C410

BENCHMARK INFORMATION:

ELEVATION WAS ESTABLISHED USING INCORS GPS CONTINUOUSLY OPERATING REFERENCE STATION INMT (INDIANPOLIS CORS ARP.) AS REFERENCED ON NGS DATA SHEETS. ERROR +/- 0.13 FOOT AND USING AS-BUILT DRAWINGS FROM H. GIBSON SURVEY DATED: 09/12/2019

FLOOD INFORMATION:

THE PARCEL DESCRIBED AND SHOWN HEREIN LIES WITHIN ZONE "X" AS SAID PARCEL PLOTS ON MAP NUMBER 18057C0120C (DATED NOVEMBER 19, 2014) OF THE FLOOD INSURANCE RATE MAPS FOR WESTFIELD, CITY OF, HAMILTON INDIANA. THE ACCURACY OF THIS FLOOD HAZARD STATEMENT IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP.

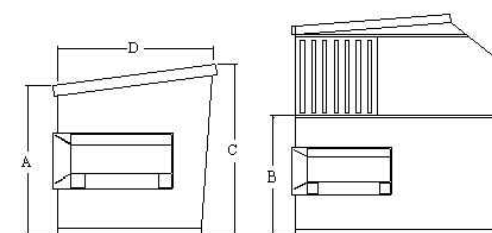
Standard Features

Heavy duty 7 GA. fork sleeves	Debris abating fork sleeves top gaskets
7 GA. fork entry guides	7 GA. fork sleeve backup plates with integral extended bumpers
3" x 4" full length bottom reinforcements	12 GA. side walls
Rugged and light plastic lids	1-1/2" PVC drain plug
Rust resistant primer inside and out	Two coats high gloss enamel finish

Options

10 GA. side walls
7 GA. floor
Clusters: 2 right, 2 swivel, for two through four cubic yard containers

Dimensions

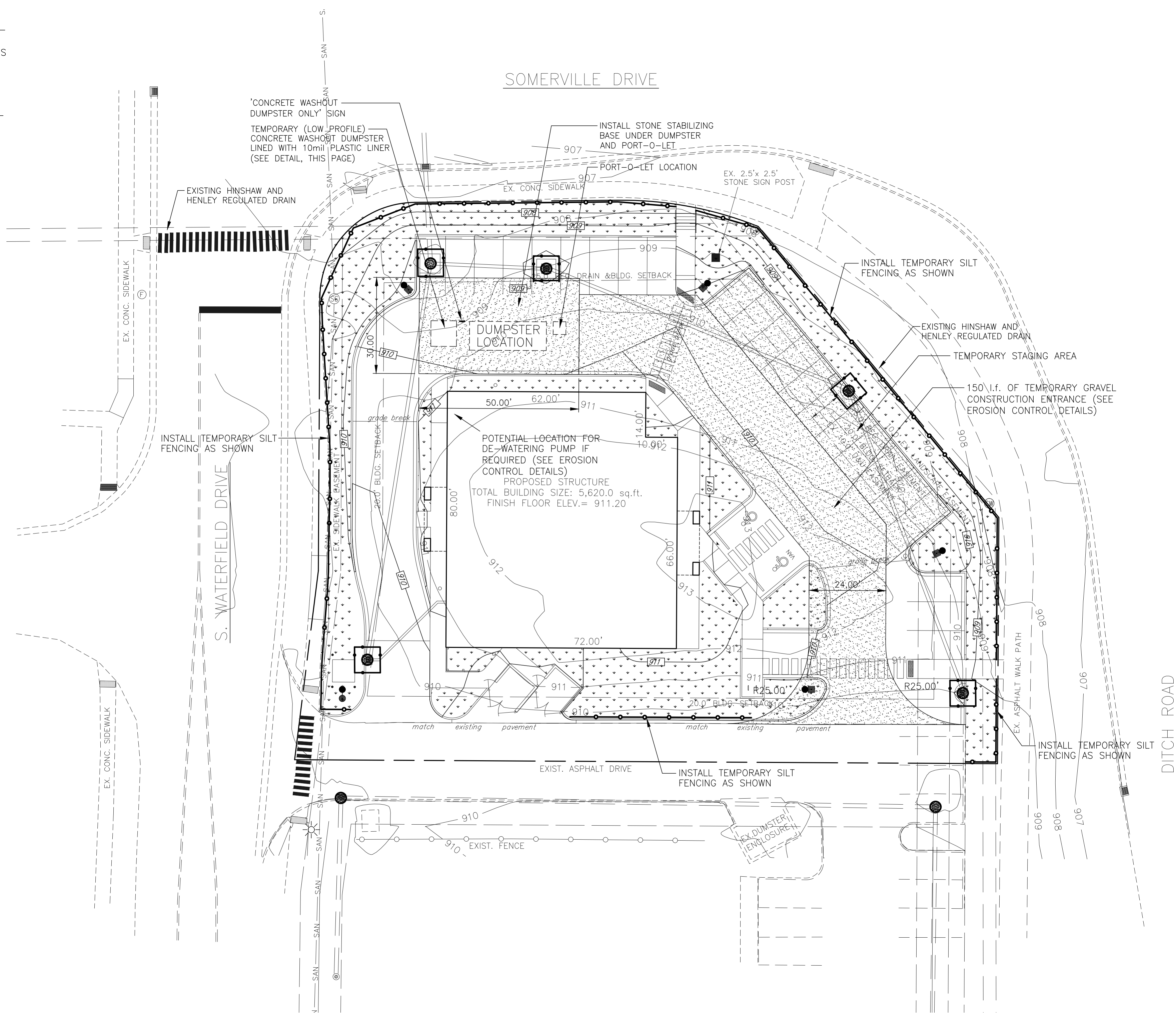


NOTE: INTERIOR OF DUMPSTER TO BE LINED WITH 10mil PLASTIC LINER.

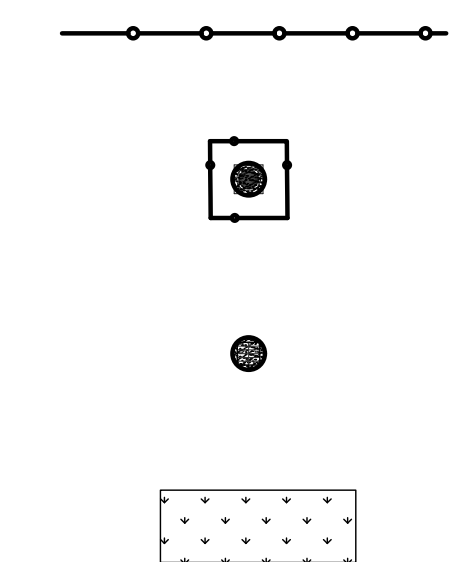
Model	FL2	FL3	FL4	FL6-LP	FL6	FL6-SL	FL8-LP	FL8	FL8-SL	FL10	FL10-SL
Capacity (cu yds)	2	3	4	6	6	8	8	8	8	10	10
(A) Loading height	39	48	51	57	63	51	51	72	51	82	51
(B) Side loading height	-	-	-	-	31	-	-	44	-	45	-
(C) Interior height	41	51	60	45	64	60	59	78	72	80	80
(D) Interior depth	36	42	53	56	66	72	56	72	80	75	88
Interior width	72	72	72	72	72	72	72	72	72	72	72
Lid size (L x W)	36x41	36x47	36x53	36x58	36x58	36x58	36x58	36x58	36x58	36x58	36x58
Side door W x H	-	-	-	30x30*	30x20	-	30x30*	30x20	-	30x30	-

All dimensions are in inches
 * Available with two side doors or two 36x47 rear lids
 -LP= low profile
 -SL= slant

CONCRETE WASHOUT DUMPSTER DETAIL



EROSION CONTROL LEGEND:



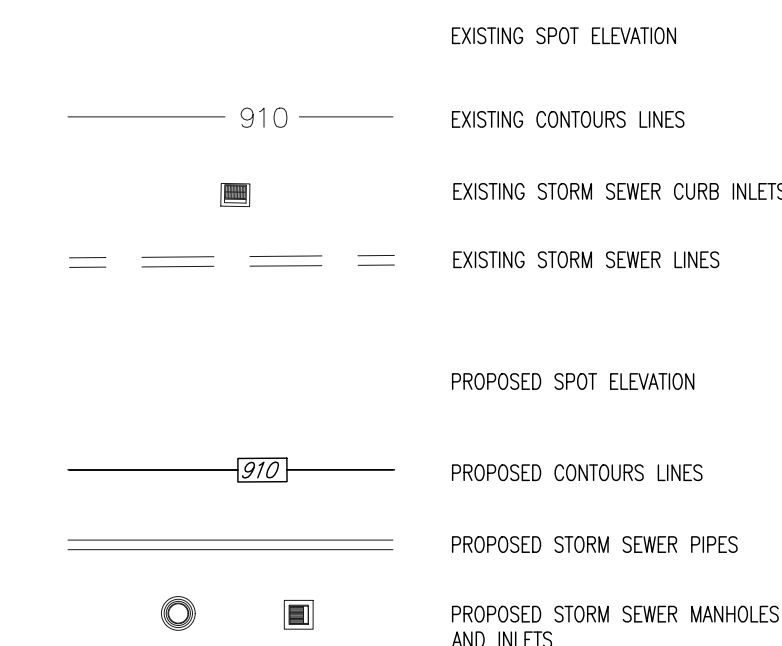
TEMPORARY SILT FENCING (SEE EROSION CONTROL DETAILS PAGE)

FABRIC DROP INLET EROSION PROTECTION - ONCE PAVEMENT IS PLACED CHANGE TO "DANDY SACK" PROTECTION (SEE EROSION CONTROL DETAILS PAGE)

FABRIC DROP INLET EROSION PROTECTION - "DANDY SACK" (SEE EROSION CONTROL DETAILS PAGE)

HATCH INDICATES: AREAS OF LAWN (SEEDED), MULCH, AND LANDSCAPING ON THIS PROJECT (SEE LANDSCAPING PLAN)

LEGEND:



SITE EROSION CONTROL PLAN
 SCALE: 1" = 20.0'

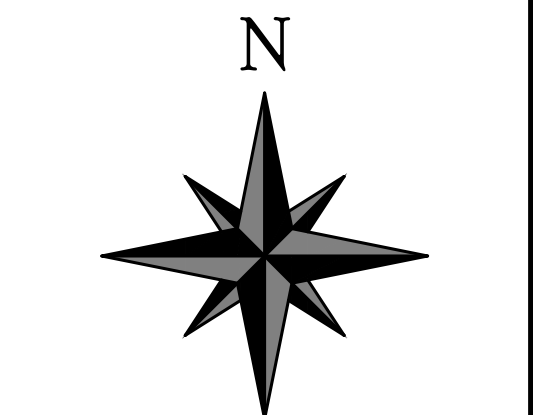
SEEDING INFO:
 1. ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED PER EROSION CONTROL DETAILS. (ANY AREAS OF CONSTRUCTION WHERE ACTIVITY IS SUSPENDED FOR MORE THAN 14 DAYS, AREAS SHALL BE TEMPORARILY SEEDED AND WATERED)

NOTE:
 NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED "WPWD" STAMPED PLANS.

EROSION REQUIREMENT NOTE:
 ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THE FIELD BY THE WPWD INSPECTOR.

UTILITY DISCLAIMER

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REVISION	DATE	DESCRIPTION
10/10/2022	revised per city comments	
10/18/2022	revised per city comments	
11/01/2022	revised per city comments	
12/01/2022	revised storm sewer placement & inverts	



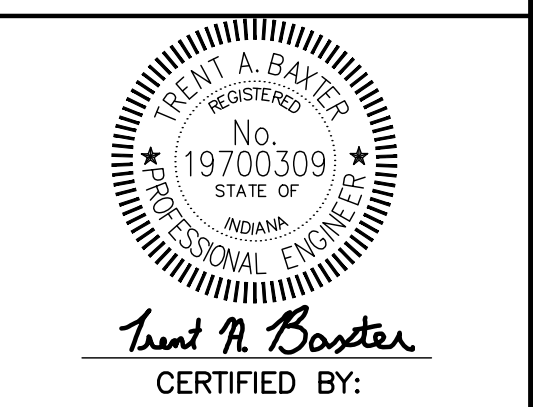
VERSATILE CONSTRUCTION GROUP, LLC.

570 East Troy Road, Suite 610
 New Westfield, Indiana 46154
 Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
 1335 S. Waterleaf Drive
 Westfield, Indiana 46074
 Site Erosion Control Plan

Job No.: 21068	Date Stamped: 08/15/2022
Drawn By: caw	Checked By: tab
Scale: 1" = 20.0'	

CAD FILE: G:\21068\c500 site erosion control plan.dwg



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SHEET TITLE: **C500**

EROSION CONTROL RESPONSIBILITY:

INSTALLATION RESPONSIBILITY:

Versatile Construction Group, LLC
Project Supervisor: Sam Allen
570 E. Tracy Road, Suite 610
New Whiteland, Indiana 46184
Phone: (317) 535-3579

CURRENT LAND OWNER:

Harmony Pointe, LLC
c/o Frank Swiss
4000 W. 106th Street, #125
Carmel, Indiana 46032
PHONE: (317) 507-7313

PROJECT ADDRESS:

Harmony Pointe
1333 S. Waterleaf Drive
Westfield, Indiana 46074

EROSION CONTROL CONTRACTOR RESPONSIBILITY:

RESPONSIBILITIES OF CONTRACTOR REGARDING THE CONSTRUCTION GENERAL PERMIT: The Contractor shall manage the discharge of storm water from the site in accordance with the NPDES Construction General Permit for Construction Activities conditions and the following provisions of this section of the specifications. The Contractor shall be responsible for conducting the storm water management practices in accordance with the permit. The Contractor shall be responsible for providing qualified inspectors to conduct the inspections required by the SWPPP. The Contractor shall be responsible for any enforcement action taken or imposed by federal, state, or local agencies, including the cost of fines, construction delays, and remedial actions resulting from the Contractor's failure to comply with the permit provisions. It shall be the responsibility of the Contractor to make any changes to the SWPPP necessary when the Contractor or any of his subcontractors elects to use borrow or fill or material storage sites, either contiguous to or remote from the construction site, when such sites are used solely for this construction site. Such sites are considered to be part of the construction site covered by the permit and this SWPPP. Off-site borrow, fill, or material storage sites which are used for multiple construction projects are not subject to this requirement, unless specifically required by state or local jurisdictional entity regulations. The Contractor should consider this requirement in negotiating with earthwork subcontractors, since the choice of an off-site borrow, fill, or material storage site may impact their duty to implement, make changes to, and perform inspections required by the SWPPP for the site.

SWPPP LEDGER: Two (2) copies of the SWPPP Ledger, in three (3) ring binders shall be provided by the Operator's Engineer. One (1) copy shall be provided to the Construction Site Superintendent and one (1) copy shall be provided to the Operator's Project Manager.

- 1. Table of Contents
- 2. A copy of the Stormwater Pollution Prevention Plan, Details, and Notes. (Sheets C500, C510, C520, and C530)
- 3. Construction Site Notice (Form A-1)
- 4. Modification Report (Form C-1)
- 5. Reportable Quantity Release Form (Form E-1)
- 6. Construction Site Inspection and Maintenance Log

The Operator's Project Manager must review and evaluate for compliance the SWPPP Ledger at each Project Review.

STORM WATER POLLUTION PREVENTION PROGRAM LOCATION REQUIREMENTS: The SWPPP Ledger is a working document that shall be maintained at the site of the Construction Activities at all times throughout the project, shall be readily available upon request by the Operator's personnel or IDEM or any other agency with regulatory authority over storm water issues, and shall be kept on-site until the site complies with the Final Stabilization section of this document. A sign or other notice must be posted near the main entrance of the construction site which contains the location of the SWPPP and the name and phone number of a contact person responsible for scheduling SWPPP viewing times, and any other State of Indiana specific requirements. The Notice of Coverage (NOC) or other form notifying the applicant that coverage under the applicable permit has been obtained must also be posted, once received.

SWPPP MODIFICATIONS: The inspection report should also identify if any revisions to the SWPPP are warranted due to unexpected conditions. The SWPPP is meant to be a dynamic working guide that is to be kept current and amended whenever:

- 1. There is a change in design, construction, operation, or maintenance at the construction site that has or could have a significant effect on the discharge of pollutants to the waters of the United States that has not been previously addressed in the SWPPP. In addition to modifying the SWPPP, the site map may also require an amendment.
- 2. Inspections or investigations by site staff, or by local, state or federal officials, determine that the discharges the SWPPP is ineffective in eliminating or significantly minimizing pollutants in storm water discharges from the construction site.
- 3. Based on the results of an inspection, it must be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP must be completed within seven (7) calendar days following the inspection.
- 4. There is a release containing a hazardous substance or oil in an amount equal or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117 or 40 CFR Part 302 occurs during a 24 hour period. Revisions to the SWPPP must be completed within seven (7) calendar days of knowledge of the release.
- 5. There is an off-site borrow or fill area that is used solely for the Harmony Pointe construction project. The modification will include, at a minimum, a revision to the SWPPP and site maps and may impact the Contractor's duty to implement and conduct inspections.

Any such changes to the SWPPP must be made in writing on the Requested Changes to the SWPPP (Form C-1) within 7 days of the date such modification or amendment is made. The Contractor's failure to modify the SWPPP to include off-site borrow or fill areas used solely for the project or to monitor or report deficiencies to the Operator will result in the Contractor being liable for fines and construction delays resulting from any federal, state, or local agency enforcement action.

Report to IDEM within 24 hours any noncompliance with the SWPPP that will endanger public health or the environment. Follow up with a written report within 5 days of the noncompliance event. The following events require 24 hour reporting: a) any unanticipated bypass which exceeds any effluent limitation in the permit, b) any upset which exceeds any effluent limitation in the permit, and c) a violation of a maximum daily discharge limitation for any of the pollutants listed by the EPA in the permit to be reported within 24 hours. The written submission must contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance.

Record-Keeping Requirements

- The Contractor shall keep the following records related to construction activities at the site:
 - Dates when major grading activities occur and the areas which were graded
 - Dates and details concerning the installation of structural controls
 - Dates when construction activities cease in an area
 - Dates when an area is stabilized, either temporarily or permanently
 - Dates of rainfall and the amount of rainfall
 - Dates and descriptions of the character and amount of any spills of hazardous materials
 - Records of reports filed with regulatory agencies if reportable quantities of hazardous materials spilled

CONTROL OF NON-STORM WATER DISCHARGES

Certain types of discharges are allowable under the IDEM General Permit for Construction Activity, and it is the intent of this SWPPP to allow such discharges. These types of discharges will be allowed under the conditions that no pollutants will be allowed to come in contact with the water prior to or after its discharge. The control measures which have been outlined previously in this SWPPP will be strictly followed to ensure that no contamination of these non-storm water discharges takes place. Furthermore, Indiana may prohibit any non-storm water discharges, allow a limited number of types of non-storm water discharges and/or will require coverage for non-storm water discharges under a separate permit. The following non-storm water discharges are allowed by the IDEM and may occur at the job site:

Possible non-storm water discharges that must be diverted to the sanitary system: discharges from fire fighting activities, fire hydrant flushing, potable water sources such as water line flushings, routine exterior building wash-down (with detergents presents). Contractor shall neutralize any super-chlorinated water from water distribution pipes before releasing it into the environment.

Possible non-storm water discharges where detergents are not used should be diverted to the storm sewer system; discharges from waters used to wash vehicles or control dust in order to minimize offsite sediment tracking, pavement wash waters where spills or leaks of hazardous materials have not occurred or detergents have not been used, irrigation drainage from watering vegetation, springs or other uncontaminated groundwater, including dewatering groundwater infiltration.

SPILL RESPONSE FOR CONTRACTOR

Spill Prevention and Response Procedures

The Contractor will train all personnel in the proper handling and cleanup of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the job site superintendent to properly train all personnel in spill prevention and clean up procedures.

- A. In order to minimize the potential for a spill of hazardous materials to come into contact with storm water, the following steps will be implemented:
 - 1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location, with their lids on, preferably under cover, when not in use.
 - 2. The minimum practical quantity of all such materials will be kept on the job site.
 - 3. A spill control and containment kit (containing, for example, absorbent materials, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.
 - 4. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.
- B. In the event of a spill, the following procedures should be followed
 - 1. All spills will be cleaned up immediately after discovery.
 - 2. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substances.
 - 3. The project manager and the Engineer of Record will be notified immediately.
 - 4. Spills of toxic or hazardous materials will be reported to the appropriate federal, state, and/or local government agency, regardless of the size of the spill. Spills of amounts that exceed Reportable Quantities of certain substances specifically mentioned in federal regulations (40 CFR 110, 40 CFR 117, and 40 CFR 302) must be immediately reported to the EPA National Response Center, telephone 1-800-424-8802, IDEM, telephone (317) 233-7745, and the Westfield City Hall 1-317-804-3000, and the Westfield Fire Station 81 1-317-804-3300.
 - 4. If the spill exceeds a Reportable Quantity, the SWPPP must be modified within seven (7) calendar days of knowledge of the discharge to provide a description of the release, the circumstances leading to the release, and the date of the release. The plans must identify measures to prevent the recurrence of such releases and to respond to such releases. Form E-1 must be completed in accordance with this response to such releases. Form E-1 must be completed in accordance with this response to such releases.
- C. The job site superintendent will be the spill prevention and response coordinator. He will designate the individuals who will receive spill prevention and response training. These individuals will each become responsible for a particular phase of prevention and response. The names of these personnel will be posted in the material storage area and in the

Releases of hazardous substances or oil in excess of reportable quantities (as established under 40 CFR 110, 40 CFR 117 or 40 CFR 302) must be reported. Form E-1 provides further details on the notification and reporting process.

INSPECTIONS AND MAINTENANCE

Inspections and maintenance shall comply with the INSPECTION AND MAINTENANCE DETAILS located on Sheet C530 of these plans. Inspections must be conducted by a "Qualified" Inspector. "Qualified" is defined as a person knowledgeable in the principles and practices of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

INSPECTION AND MAINTENANCE PROCEDURES IN ADDITION TO DETAILS

The following inspection and maintenance practices will be used to maintain erosion and sediment controls and stabilization measures in addition to the INSPECTION AND MAINTENANCE DETAILS:

- 1. All control measures will be inspected as outlined in the INSPECTION GUIDELINES TABLE.
- 2. All measures will be maintained in good working order; if repairs or other measures are found to be necessary, they will be initiated within 24 hours of report.
- 3. Temporary and permanent seeding and all other stabilization measures will be inspected for bare spots, washouts, and healthy growth.
- 4. Gravel shall be added to transit paths as needed to prevent vehicle tracking of sediments.
- 5. The paved streets adjacent to the site entrance will be inspected daily and swept as necessary to remove any excess mud, dirt, or rock tracked from the site.
- 6. The job site superintendent will be responsible for selecting and training the individuals who will be responsible for these inspections, maintenance and repair activities.
- 7. Personnel selected for the inspection and maintenance responsibilities shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls that are used onsite in good working order.
- 8. Disturbed areas and materials storage areas will be inspected for evidence of or potential for pollutants entering stormwater systems.

EROSION CONTROL INSTALLATION AND CONSTRUCTION SEQUENCING

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows:

- A. Conduct an Erosion and Sediment control pre-construction meeting with the City of Westfield.
- B. Install temporary site construction entrance.
- C. Install silt fence perimeter control and silt inlet protection.
- D. Install dumpster protection and concrete wash out stone pad.
- E. Commence site grading and building pad construction.
- F. Any disturbed areas of the site where construction activity has ceased for more than 14 days shall be temporarily seeded and watered.
- G. Install all storm sewers and structures.
- H. Install protection at the locations of all ends of exposed storm sewer pipes.
- I. Begin construction of building.
- J. Finalize pavement sub-grade preparation.
- K. Install base material as required for asphaltic pavement
- L. Construct all curbs and sidewalks.
- M. Construct asphaltic parking lot and road pavement
- N. Change temporary inlet protection to 'Dandy Socks'.
- O. Carry out final seeding and planting.
- P. Remove silt fencing and 'Dandy Socks' only after all paving is complete and exposed surfaces are stabilized.

EROSION CONTROL INSTALLATION DETAILS

TREE PRESERVATION

TREE PROTECTION

Protect trees from equipment damage. (Wounds provide entry for insects and disease and reduce transport of sap.)
If trees are damaged, repair immediately. (Repair of wounded areas allows trees to heal quickly, thus reducing insect and disease problems.)

MATERIALS

- 1. Fencing (orange safety fencing for increased visibility), snow fence and support posts.
- 2. Signage.
- 3. Wood mulch, chips, etc.
- 4. Specialized equipment (brush cutter, rotary axe, hand tools).

APPLICATION

- 1. Install fencing around a specimen tree(s) as far out as its crown to keep equipment off the rooting area.
- 2. If a fence cannot be erected, cushion the rooting area with six inches of wood chips, wood, or brick paths.
- 3. Protect trees from equipment damage by creating some type of barrier, fencing them off, or wrapping individual trees with snow fencing.
- 4. Prune low-hanging limbs that could otherwise be broken off by equipment.

TEMPORARY CONSTRUCTION ENTRANCE

DIMENSION

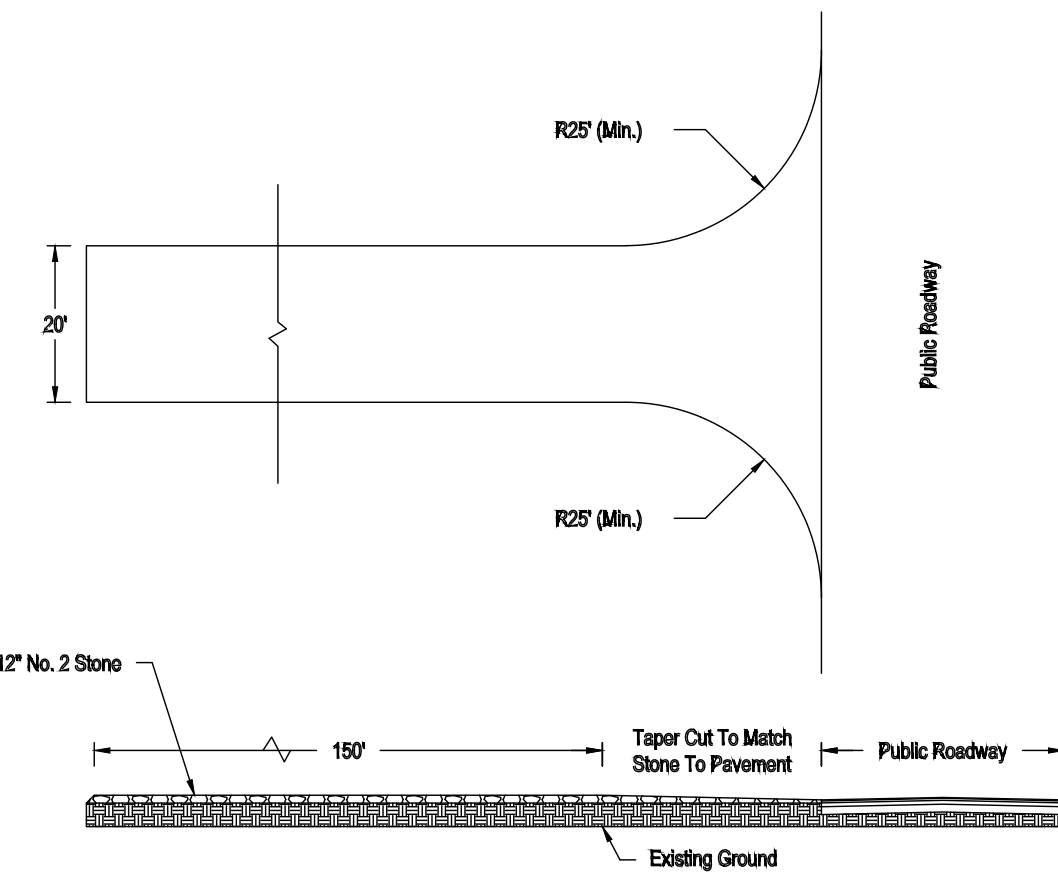
- 1. Width - 12 feet minimum or full width of entrance/exit drive, whichever is greater.
- 2. Length - 50 feet minimum or full length of drive, whichever is greater.
- 3. Thickness - six inches minimum.

MATERIALS

- 1. One to two and one-half inch diameter washed aggregate [INDOT CA No. 2.
- 2. One-half to one and one-half inch washed aggregate [INDOT CA No. 53 optional, used primarily where the purpose of the pad is to keep soil from adhering to vehicle tires].
- 3. Geotextile fabric underlayment (used as a separation layer to prevent intermixing of aggregate and the underlying soil material and to provide greater bearing strength when encountering wet conditions or soils with a seasonal high water table limitation).

INSTALLATION

- 1. Remove all vegetation and other objectionable material from the foundation area.
- 2. Grade the foundation and crown for positive drainage.
- 3. Install a culvert pipe under the pad if needed to maintain proper public road drainage.
- 4. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
- 5. Place aggregate (INDOT CA No. 2) to the dimensions and grade shown in the construction plans, leaving the surface smooth and sloped for drainage.
- 6. Top-dress the drive with washed aggregate (INDOT CA No.53).
- 7. Where possible, divert all storm water runoff and drainage from the temporary construction ingress/egress pad to a sediment trap or basin.



TEMPORARY CONSTRUCTION DRIVE
CITY OF WESTFIELD INDIANA
2/26/16 DATE
FIGURE EC-10

TOPSOIL SALVAGE AND UTILIZATION

SOIL STOCKPILE AREA

- 1. Free of stumps, rock, and construction debris.
- 2. Stockpile covered with vegetation or a tarp.
- 3. Surrounded by a sediment barrier or sediment filter.

APPLICATION

- 1. Prior to stripping topsoil, install any site-specific down slope measures needed to control storm water runoff and sedimentation.
- 2. Remove soil material no deeper than the surface soil (e.g., A or Ap horizon).
- 3. Stockpiled soil should be temporarily seeded or covered with a tarp and/or surrounded by a sediment control measure.
- 4. Prior to applying topsoil, grade the subsoil and roughen the top three to four inches by disking. (This helps the topsoil bond with the subsoil. If the topsoil and existing soil surface are not properly bonded, water will not infiltrate evenly and it will be difficult to establish vegetation.)
- 5. Apply topsoil evenly to a depth of at least four inches, then compact slightly to improve contact with the subsoil.
 - a. Depths of four inches or greater are recommended if the underlying material is bedrock, fine-textured clayey soils, loose sand, rock fragments, aggregate, or other unsuitable soil material.
 - b. Do not apply topsoil when the site is wet, muddy, or frozen because it makes spreading difficult, inhibits bonding, can cause compaction problems, and forms a cloddy seedbed. Whenever possible avoid applying topsoil to the existing soil surface if the two layers have contrasting textures. Clayey topsoil over sandy subsoil is a particularly poor combination, as water creeps along the junction between the two soil layers and may cause the topsoil to slough.
 - c. Applying topsoil on slopes with a ratio of 2:1 or greater may result in soil slippage and may require additional measures to provide good bonding of the soil material.
- 6. After spreading the topsoil, grade and stabilize the site.

EROSION CONTROL INSTALLATION DETAILS (CONT.)

TEMPORARY SEEDING

MATERIALS

- 1. Soil Amendments - Select materials and rates as determined by a soil test (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services) or 400 to 600 pounds of 12-0-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorus levels in the soil profile.
- 2. Seed - Select appropriate plant species seed or seed mixtures on the basis of quick germination, growth, and time of year to be seeded (see Table 1).
- 3. Mulch -
 - a. Straw, hay, wood fiber, etc. (to protect seedbed, retain moisture, and encourage plant growth).
 - b. Anchored to prevent removal by wind or water or covered with manufactured erosion control blankets.

Table 1. Temporary Seeding Specifications

Seed Species ¹	Rate per Acre	Planting Depth	Optimum Dates ²
Wheat or Rye	150 lbs.	1 to 1½ inches	Sept. 15 - Oct. 30
Spring Oats	100 lbs.	1 inch	March 1 - April 15
Annual Ryegrass	40 lbs.	¼ inch	March 1 - May 1 Aug. 1 - Sept. 1
German Millet	40 lbs.	1 to 2 inches	May 1 - June 1
Sudangrass	35 lbs.	1 to 2 inches	May 1 - July 30
Buckwheat	60 lbs.	1 to 2 inches	April 15 - June 1
Corn (broadcast)	300 lbs.	1 to 2 inches	May 11 - Aug. 10
Sorghum	35 lbs.	1 to 2 inches	May 1 - July 15

¹ Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than one year (see Permanent Seeding Sheet C510-C520).

² Seeding done outside the optimum seeding dates increases the chances of seeding failure. Dates may be extended or shortened based on the location of the project site within the state.

Notes:
Mulch alone is an acceptable temporary cover and may be used in lieu of temporary seeding, provided that it is appropriately anchored. A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

SEEDBED PREPARATION

- 1. Test soil to determine pH and nutrient levels.
- 2. Apply soil amendments as recommended by the soil test. If testing is not done, apply 400 to 600 pounds per acre of 12-0-12 analysis fertilizer, or equivalent.
- 3. Work the soil amendments into the upper two to four inches of the soil with a disk or rake operated across the slope.

SEEDING

- 1. Select a seed species or an appropriate seed mixture and application rate from Table 1.
- 2. Apply seed uniformly with a drill or cultipacker seeder or by broadcasting. Plant or cover seed to the depth shown in Table 1.

Notes:

- 1. If drilling or broadcasting the seed, ensure good seed-to-soil contact by firming the seedbed with a roller or cultipacker after completing seeding operations.
- 2. Daily seeding when the soil is moist is usually most effective.
- 3. If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.
- 3. Apply mulch (Mulching Sheet C520) and anchor it in place.

	TEMPORARY SEEDING DATES											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WHEAT OR RYE									///	///		
OATS			///	///								
ANNU. RYEGRASS					///	///	///	///	///	///		

/// IRRIGATION NEEDED THIS PERIOD. TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREA USE MULCH

PERMANENT SEEDING

MATERIALS

- 1. Soil Amendments - (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services) or 400 to 600 pounds of 12-0-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorus levels in the soil profile.
- 2. Seed - Select appropriate plant species seed or seed mixtures on the basis of quick germination, growth, and time of year to be seeded (see Table 1).
- 3. Mulch -
 - a. Straw, hay, wood fiber, etc. (to protect seedbed, retain moisture, and encourage plant growth).
 - b. Anchored to prevent removal by wind or water or covered with manufactured erosion control blankets.

SITE PREPARATION

- 1. Grade the site to achieve positive drainage.
- 2. Add topsoil (see Topsoil Salvage and Utilization Sheet C510) or mulch (see Mulching Sheet C520) to achieve needed depth for establishment of vegetation. (Compost material may be added to improve soil moisture holding capacity, soil friability, and nutrient availability.)

SEEDBED PREPARATION

- 1. Test soil to determine pH and nutrient levels.
- 2. Apply soil amendments as recommended by the soil test and work into the upper two to four inches of soil. If testing is not done, apply 400 to 600 pounds per acre of 12-0-12 analysis fertilizer, or equivalent.
- 3. Till the soil to obtain a uniform seedbed. Use a disk or rake, operated across the slope, to work the soil amendments into the upper two to four inches of the soil.
- 3. Mulch all seeded areas (see Mulching Sheet C520)

SEEDING

- 1. Select a seeding mixture and rate from Table 1. Select seed mixture based on site conditions, soil pH, intended land use, and expected level of maintenance.
- 2. Apply seed uniformly with a drill or cultipacker seeder or by broadcasting. Plant or cover the seed to a depth of one-fourth to one-half inch. If drilling or broadcasting the seed, ensure good seed-to-soil contact by firming the seedbed with a roller or cultipacker after completing seeding operations. (If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.) and use appropriate methods to anchor the mulch in place. Consider using erosion control blankets on sloping areas and conveyance channels (see Erosion Control Blanket Sheet 520).

REVISION	10/18/2022	revised per city comments
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VERSATILE CONSTRUCTION GROUP, LLC.

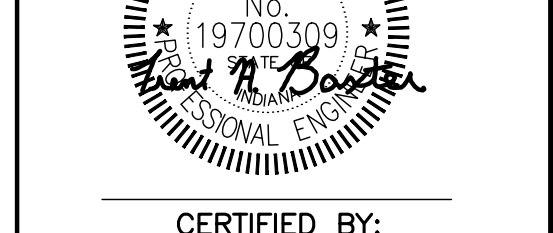
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
1333 S. Waterleaf Drive
Westfield, Indiana 46074
Erosion Control Details

Job No.:	Date Stamped:
21068	08/15/2022

Drawn By:	Checked By:	Scale:
tab	tab	

CAD FILE:
c:\21068\c510 erosion control details.dwg



CERTIFIED BY:
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SHEET TITLE:
C510

EROSION CONTROL INSTALLATION DETAILS (CONT.)

PERMANENT SEEDING (CONT.)

Table 1. Permanent Seeding Recommendations
This table provides several seed mixture options. Additional seed mixtures are available commercially. When selecting a mixture, consider intended land use and site conditions, including soil properties (e.g., soil pH and drainage), slope aspect, and the tolerance of each species to shade and drought.

Open Low-Maintenance Areas (remaining idle more than six months)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white clover ¹	70 lbs. 2 lbs.	5.6 to 7.0
2. Perennial ryegrass - tall fescue ²	70 lbs. 50 lbs.	5.6 to 7.0
3. Tall fescue ² - white clover ¹	70 lbs. 2 lbs.	5.5 to 7.5

Steep Banks and Cuts, Low-Maintenance Areas (not mowed)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Smooth brome grass - red clover ¹	35 lbs. 20 lbs.	5.5 to 7.0
2. Tall fescue ² - white clover ¹	50 lbs. 2 lbs.	5.5 to 7.5
3. Tall fescue ² - red clover ¹	50 lbs. 20 lbs.	5.5 to 7.5
4. Orchard grass - red clover ¹ - white clover ¹	30 lbs. 20 lbs. 2 lbs.	5.6 to 7.0
5. Crownvetch ¹ - tall fescue ²	12 lbs. 30 lbs.	5.6 to 7.0

Lawns and High-Maintenance Areas

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Bluegrass	140 lbs.	5.5 to 7.0
2. Perennial ryegrass (turf type)	60 lbs. 90 lbs.	5.6 to 7.0
3. Tall fescue (turf type) ² - bluegrass	170 lbs. 30 lbs.	5.6 to 7.5

Channels and Areas of Concentrated Flow

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white ¹	150 lbs. 2 lbs.	5.5 to 7.0
2. Kentucky bluegrass - smooth bromegrass - switchgrass - timothy - perennial ryegrass - white clover ²	20 lbs. 10 lbs. 3 lbs. 4 lbs. 10 lbs. 2 lbs.	5.5 to 7.5
3. Tall fescue ¹ - white clover ²	150 lbs. 2 lbs.	5.5 to 7.5
4. Tall fescue ² - perennial ryegrass - Kentucky bluegrass	150 lbs. 20 lbs. 20 lbs.	5.5 to 7.5

- Notes:
1. An oat or wheat companion or nurse crop may be used with any of the above permanent seeding mixtures, at the following rates:
(a) spring oats – one-fourth to three-fourths bushel per acre
(b) wheat – no more than one-half bushel per acre
2. A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

	PERMANENT SEEDING DATES											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Non-irrigated(1)										///	///	///
Irrigated			///	///	///	///	///	///	///	///	///	///
Dormant(2)												

/// IRRIGATION NEEDED THIS PERIOD. TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREA USE MULCH
(1) LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED
(2) INCREASE SEEDING APPLICATION BY 50%

MULCHING

MATERIALS
Table 1. Mulch Specifications

Material ¹	Rate per Acre	Comments
Straw or hay	2 tons	Should be dry, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see Table 2).
Wood fiber or cellulose	1 ton	Apply with a hydraulic mulch machine and use with tackling agent.

¹ Mulching is not recommended in concentrated flows. Consider erosion control blankets or other stabilization methods.

MULCHING (CONT.)

Table 2. Mulch Anchoring Methods

Anchoring Method ¹	How to Apply
Mulch anchoring tool or farm disk (dull, serrated, and blades set straight)	Crimp or punch the straw or hay two to four inches into the soil. Operate machinery on the contour of the slope.
Cleating with dozer tracks	Operate dozer up and down slope to prevent formation of rills by dozer cleats.
Wood hydromulch fibers	Apply according to manufacturer's recommendations.
Synthetic tackifiers, binders, or soil stabilizers	Apply according to manufacturer's recommendations.
Netting (synthetic or biodegradable material)	Install netting immediately after applying mulch. Anchor netting with staples. Edges of netting strips should overlap with each up-slope strip overlapping four to six inches over the adjacent down-slope strip. Best suited to slope applications. In most instances, installation details are site specific, so manufacturer's recommendations should be followed.

¹ All forms of mulch must be anchored to prevent displacement by wind and/or water.

APPLICATION

- Apply mulch at the recommended rate shown in Table 1.
- Spread the mulch material uniformly by hand, hayfork, mulch blower, or hydraulic mulch machine. After spreading, no more than 25 percent of the ground should be visible.
- Anchor straw or hay mulch immediately after application. The mulch can be anchored using one of the methods listed below:
 - Crimp with a mulch anchoring tool, a weighted farm disk with dull serrated blades set straight, or track cleats of a bulldozer,
 - Apply hydraulic mulch with short cellulose fibers,
 - Apply a liquid tackifier, or
 - Cover with netting secured by staples.

EROSION CONTROL BLANKET

MATERIALS

- Organic (straw, excelsior, woven paper, coconut fiber, etc.) or synthetic mulch incorporated with a polypropylene, natural fiber or similar netting material (The netting may be biodegradable, photodegradable or permanent.)
- Six to 12-inch staples, pins, or stakes.

INSTALLATION

- Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
- Prepare the seedbed, add soil amendments, and permanently seed (see Permanent Seeding Sheet C510, C520) the area immediately following seedbed preparation.
- Lay erosion control blankets on the seeded area so that they are in continuous contact with the soil with each up-slope or up-stream blanket overlapping the down-slope or down-stream blanket by at least eight inches, or follow manufacturer's recommendations
- Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with soil and tamp down. In certain applications, the manufacturer may require additional check slots at specific locations down slope from the uppermost edge of the upper blankets.
- Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.

TURF REINFORCEMENT MAT

MATERIALS

- Anchoring
Staples, pins, or stakes used to prevent movement or displacement of mat. (Follow manufacturer's recommendations for specific applications.)
- Turf reinforcement mat (typically consists of a three-dimensional matrix of polypropylene, nylon, or other material).
- Six to 12-inch staples, pins, or stakes.

INSTALLATION

- Select a turf reinforcement mat appropriate for the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
- Grade and prepare the soil foundation for mat installation.
- Install the mat according to the manufacturer's instructions, including burying the edges in check slots or slit trenches.
- Anchor the mat in place by driving staples, pins, or stakes through the mat and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.
- Backfill the mat with topsoil, filling to the top of the mat.
- Seed the area after the mat has been installed and backfilled with soil.
- Install erosion control blankets over the seeded turf reinforcement mat to stabilize the surface.

ROCK CHECK DAM

MATERIALS

- Geotextile fabric (8 ounce or heavier; nonwoven).
- Indiana Department of Transportation Revetment riprap for dam.
- INDOT CA No. 5 aggregate for use as filter medium (Aggregate must be well-graded).

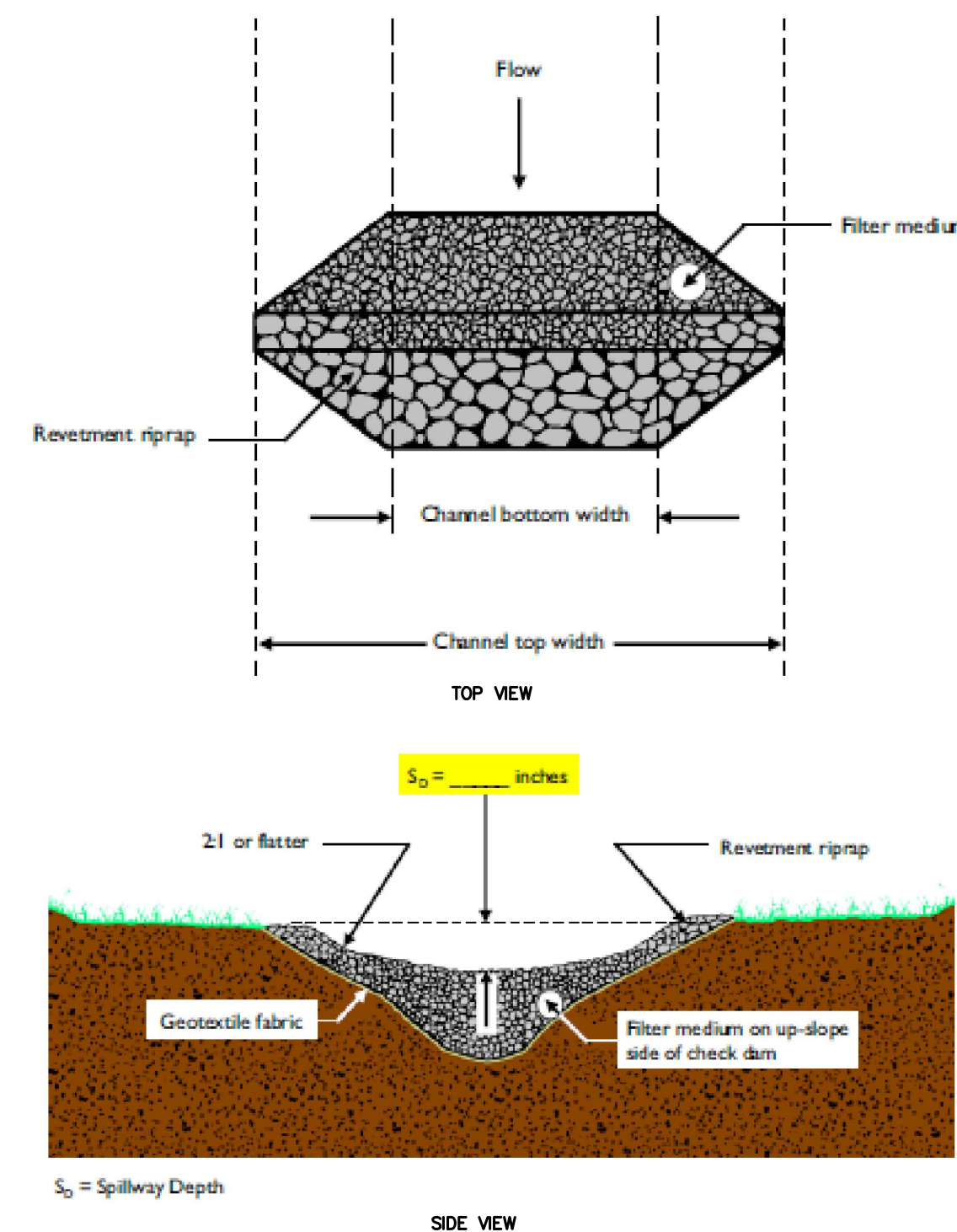
Note: INDOT CA No. 8 aggregate is acceptable if No. 5 aggregate is not available. The use of No. 8 aggregate may result in more frequent overtopping of the structure and will increase the frequency of structure maintenance.

INSTALLATION

- Lay out the location of the check dam.
- Excavate a cutoff trench into the channel bottom and ditch banks, extending it a minimum of 18 inches beyond the top of the ditch bank.
- Install and anchor filter fabric in the channel and cutoff trench.
- Place riprap in the cutoff trench and channel to the lines and dimensions shown in the construction plans. The center of each dam must be at least nine inches lower than the uppermost points of contact between the riprap dam and channel banks.
- Extend the riprap at least 18 inches beyond the top of the channel banks to keep overflow water from eroding areas adjacent to the channel banks before it re-enters the channel.

ROCK CHECK DAM (CONT.)

- Place filter medium (INDOT CA No. 5 aggregate) on the up-slope side of the dam. Place filter medium over the entire face of the dam up to the base of the overflow weir notch.
- Stabilize the channel above the uppermost dam.
- Install an erosion-resistant lining in the channel below the lowermost dam. The lining should extend a minimum distance of six feet below the dam.
- Additional sediment storage can be provided by excavating a small sediment trap on the upstream side of the check dam.



GEOTEXTILE FABRIC DROP INLET PROTECTION

MATERIALS

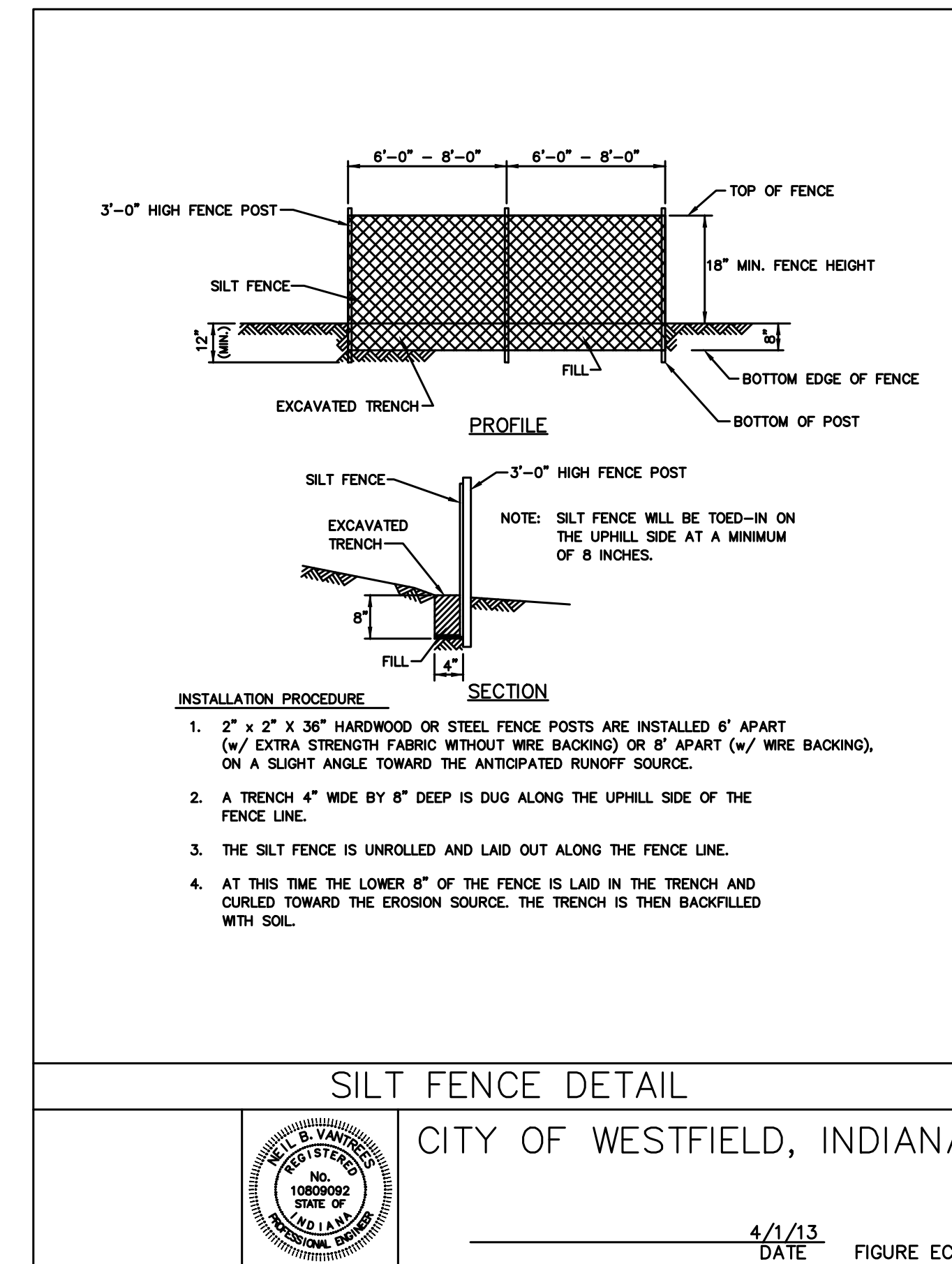
- Support posts
- 2 x 2 inch or 2 x 4 inch hardwood posts.
- Three feet length, minimum.
- 1 x 2 inch or 1 x 3 inch hardwood cross bracing lumber.
- Lathe.
- Staples or nails.
- Geotextile fabric

Table 1. Geotextile Fabric Specifications

Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (Inhibitors and stabilizers to ensure six month minimum life at temperatures of 0° to 120° F)	70%	85%
Tensile Strength at 20% Elongation:		
Standard Strength	30 lbs./linear inch	50 lbs./linear inch
Extra Strength	50 lbs./linear inch	70 lbs./linear inch
Slurry Flow Rate	0.3 gal./min./sq. ft.	4.5 gal./min./sq. ft.
Water Flow Rate	15 gal./min./sq. ft.	220 gal./min./sq. ft.

INSTALLATION

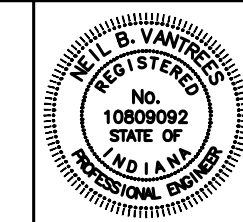
- Dig an eight-inch deep, four-inch wide trench around the perimeter of the inlet.
- If using pre-assembled geotextile fabric and posts, drive the posts into the soil, tightly stretching the geotextile fabric between posts as each is driven. (Posts must be placed on the inlet side of the anchor trench with the geotextile fabric on the side of the trench farthest from the inlet.)
Note: If assembling the geotextile fabric and posts on-site, drive the posts into the soil and then secure the geotextile fabric to the posts by placing a piece of lathe over the fabric and fastening it to the post (stretching the fabric between posts as it is fastened).
- Use the wrap joint method when joining posts (see Silt Fence on sheet C520, C530).
- Place the bottom 12 inches of geotextile fabric into the eight-inch deep trench, laying the remaining four inches in the bottom of the trench and extending away from the inlet.
- Backfill the trench with soil material and compact it in place.
- Brace the posts by nailing braces into each corner post or utilize rigid panels to support fabric.
Note: In situations where storm water may bypass the structure, either:
 - Set the top of the geotextile fabric filter at least six inches lower than the ground elevation on the down-slope side of the storm drain inlet,
 - Build a temporary dike, compacted to six inches higher than the fabric, on the down-slope side of the storm drain inlet, AND/OR



INSTALLATION PROCEDURE

- 2" x 2" x 36" HARDWOOD OR STEEL FENCE POSTS ARE INSTALLED 6' APART (w/ EXTRA STRENGTH FABRIC WITHOUT WIRE BACKING) OR 8' APART (w/ WIRE BACKING), ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
- A TRENCH 4" WIDE BY 8" DEEP IS DUG ALONG THE UPHILL SIDE OF THE FENCE LINE.
- THE SILT FENCE IS UNROLLED AND LAID OUT ALONG THE FENCE LINE.
- AT THIS TIME THE LOWER 8" OF THE FENCE IS LAID IN THE TRENCH AND CURLED TOWARD THE EROSION SOURCE. THE TRENCH IS THEN BACKFILLED WITH SOIL.

SILT FENCE DETAIL
CITY OF WESTFIELD, INDIANA



4/1/13 DATE
FIGURE EC-4

SILT FENCE

MATERIALS

- Fabric – woven or non-woven geotextile fabric meeting specified minimums outlined in Table 2.
 - Height – a minimum of 18 inches above ground level (30 inches maximum).
 - Reinforcement – fabric securely fastened to posts with wood lathe.
- Support Posts
 - 2 x 2 inch hardwood posts. Steel fence posts may be substituted for hardwood posts (steel posts should have projections for fastening fabric).
 - Spacing – Eight feet maximum if fence is supported by wire mesh fencing. Six feet maximum for extra-strength fabric without wire backing.

Table 1. Slope Steepness Restrictions

Percent Slope	Maximum Distance
< 2%	< 50:1 100 feet
2% – 5%	50:1 to 20:1 75 feet
5% – 10% ¹	20:1 to 10:1 50 feet
10% – 20% ¹	10:1 to 5:1 25 feet
> 20% ¹	> 5:1 15 feet

¹ Consider other alternatives.

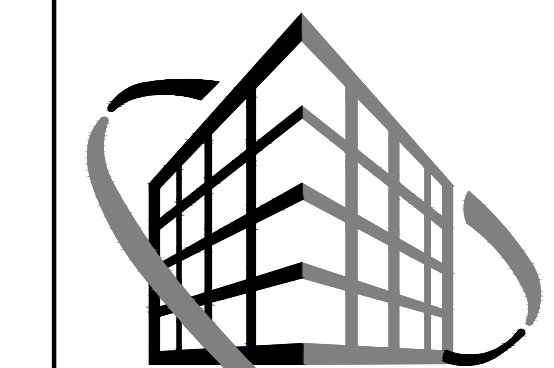
Note: Multiple rows of silt fence are not recommended on the same slope.

Table 2. Geotextile Fabric Specifications for Silt Fence (minimum)

Physical Property	Woven Geotextile Fabric	Non-Woven Geotextile Fabric
Filtering efficiency	85%	85%
Textile strength at 20% elongation		
Standard strength	30 lbs. per linear inch	50 lbs. per linear inch
Extra strength	50 lbs. per linear inch	70 lbs. per linear inch
Slurry flow rate	0.3 gal./min./square feet	4.5 gal./min./square feet
Water flow rate	15 gal./min./square feet	220 gal./min./square feet
UV resistance	70%	85%
Post spacing	7 feet	5 feet

Note: Silt fences can be purchased commercially.

REVISION	10/18/2022	revised per city comments
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Ph: 317.535.3579 Fax: 317.535.3581

Harmony Pointe
1333 S. Waterleaf Drive
Westfield, Indiana 46074
Erosion Control Details

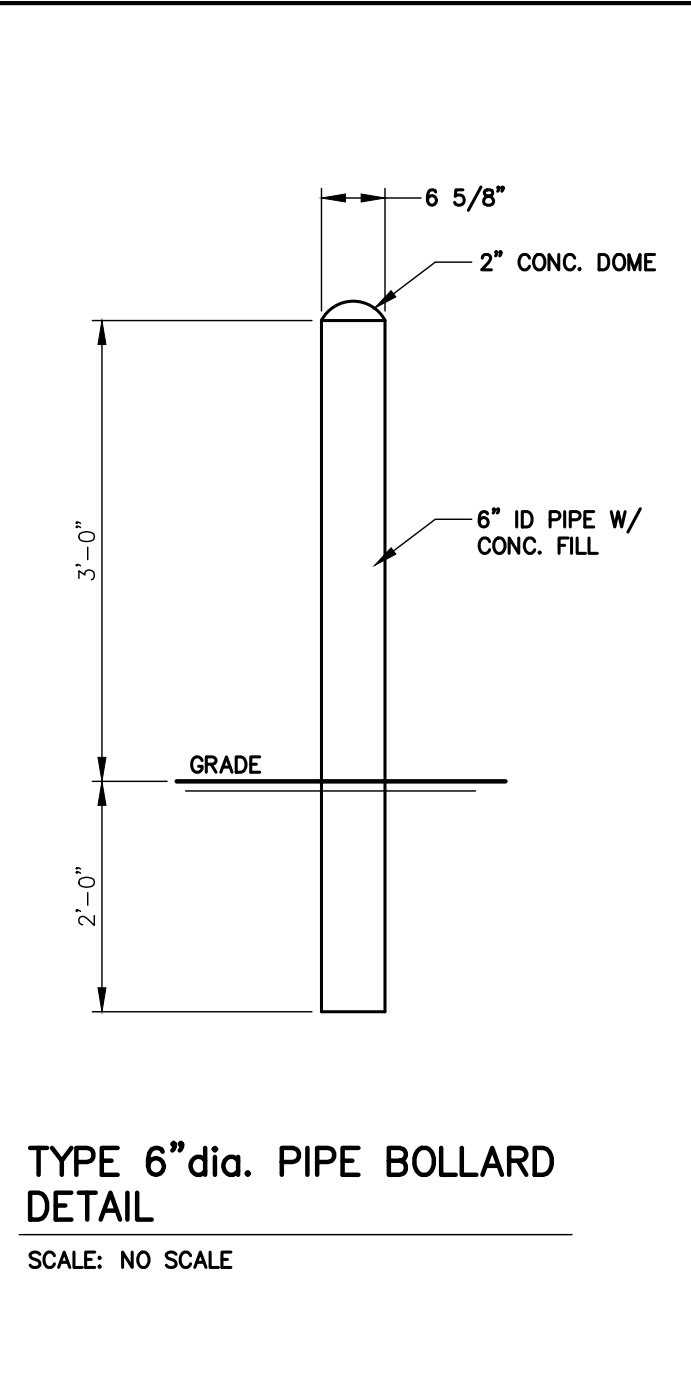
Job No.:	Date Stamped:
21068	08/15/2022
Drawn By:	Checked By: Scale:
tab	tab

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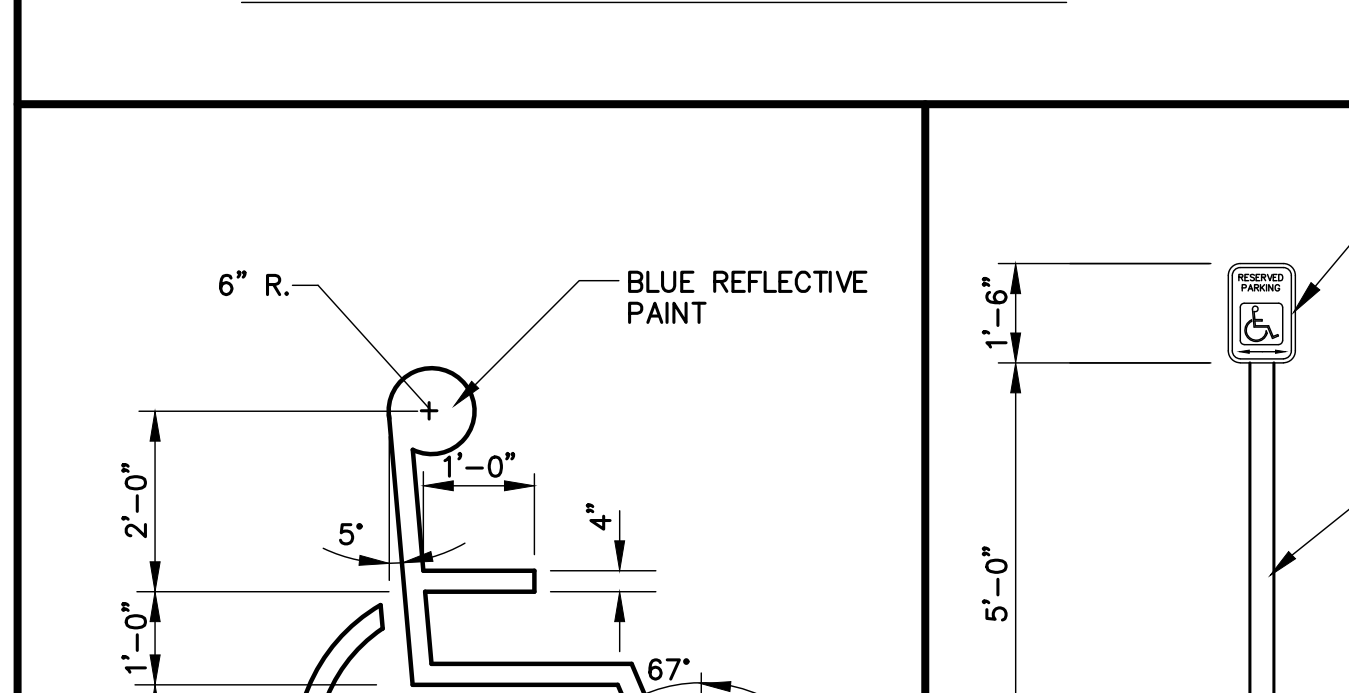
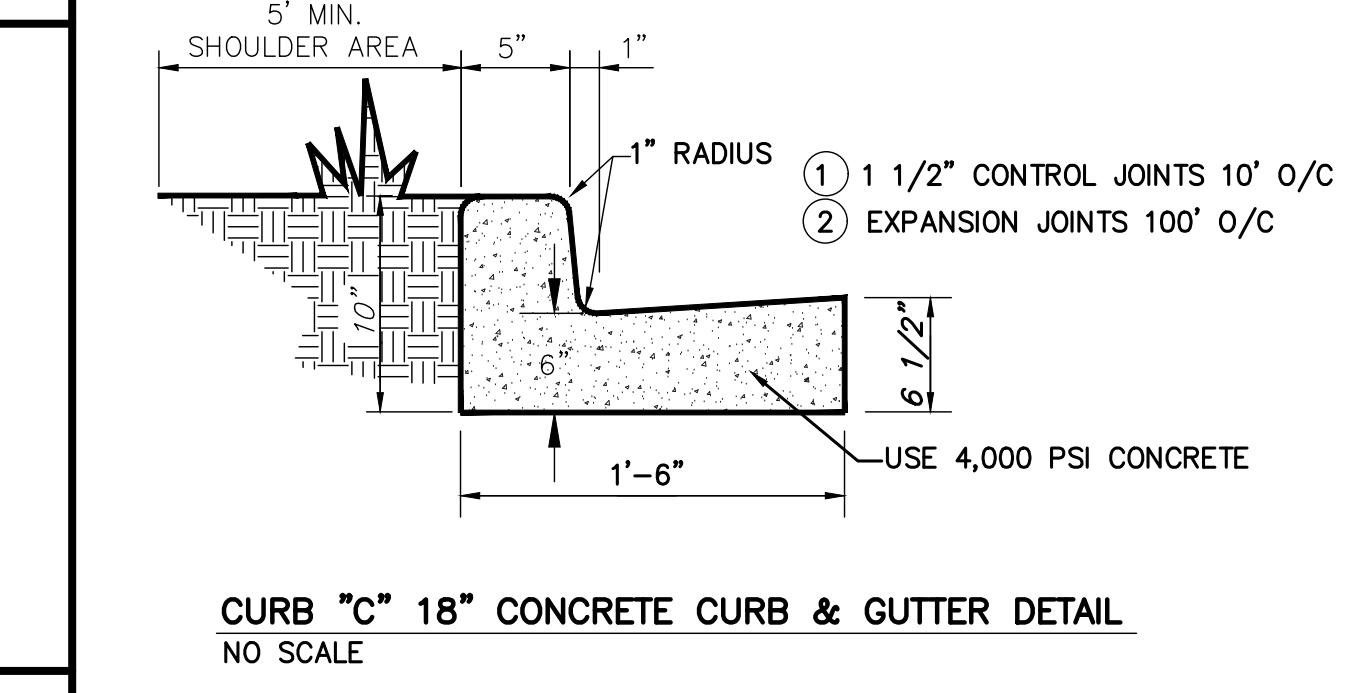
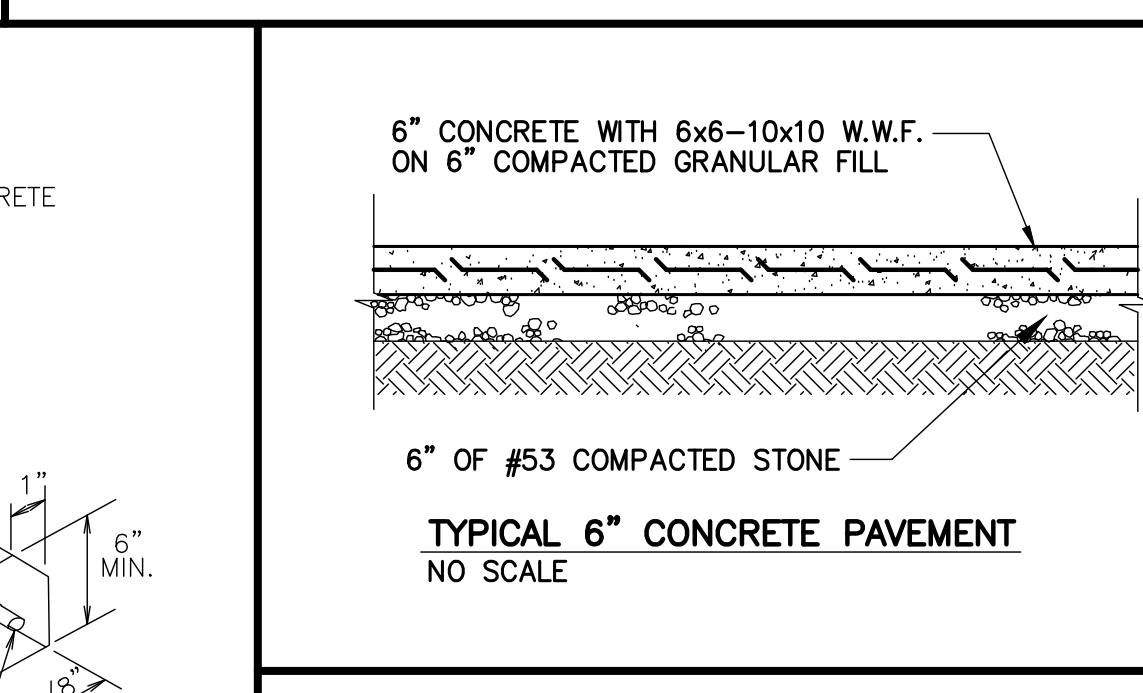
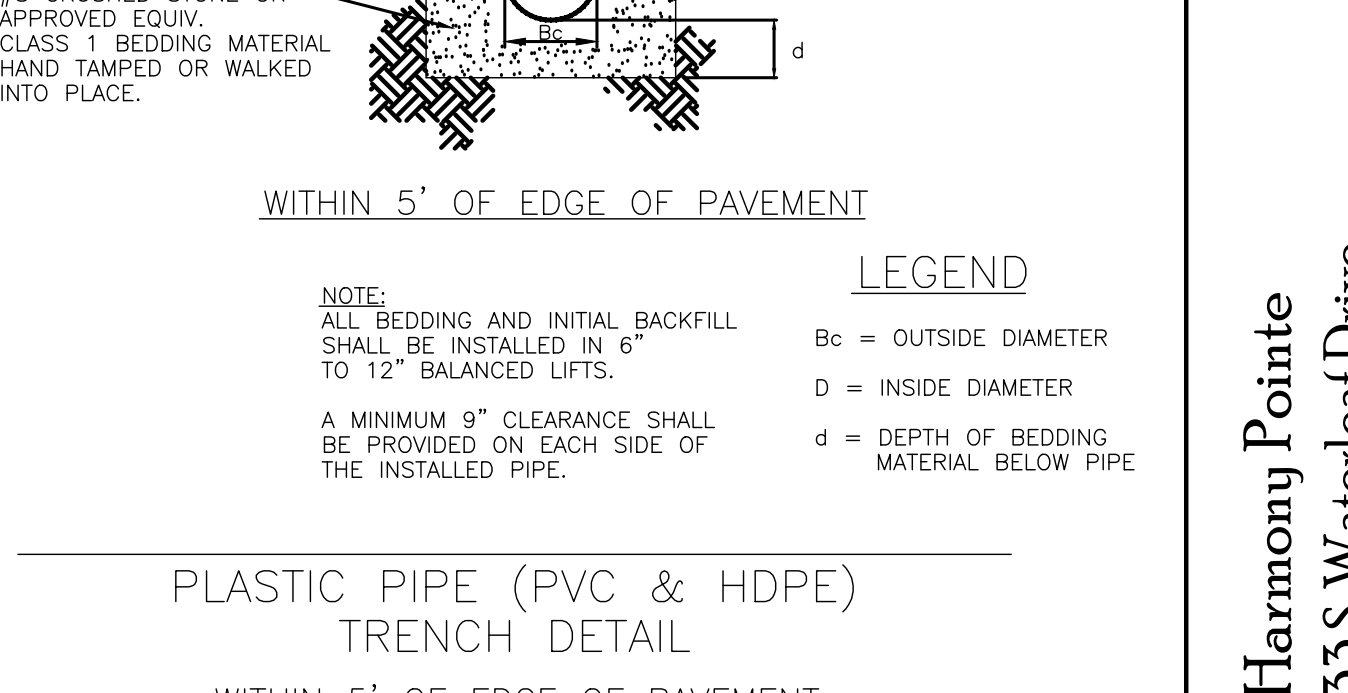
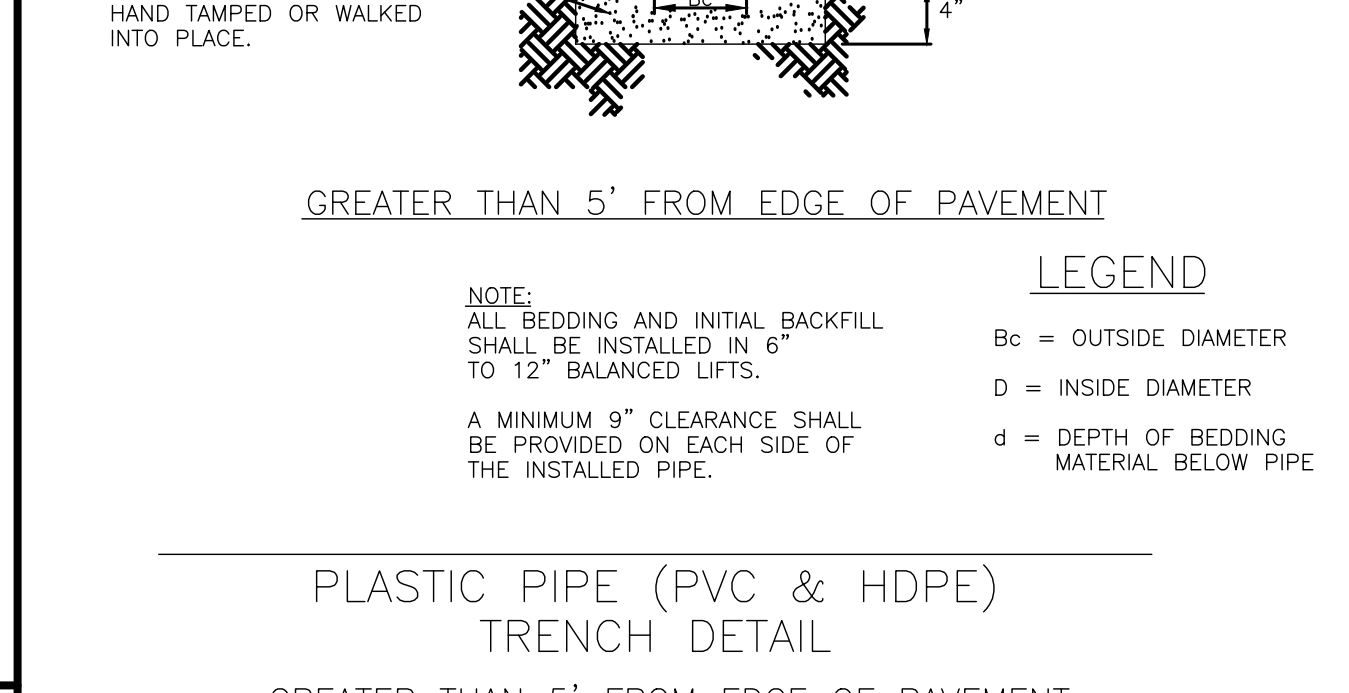
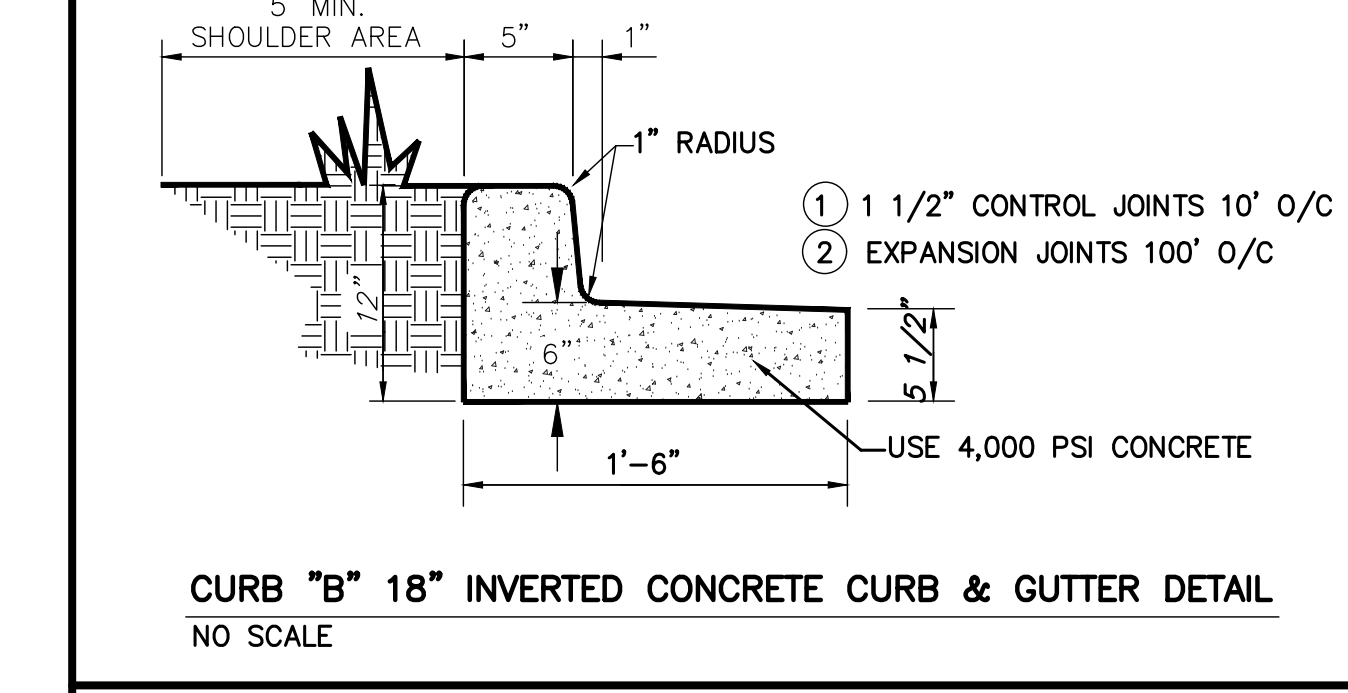
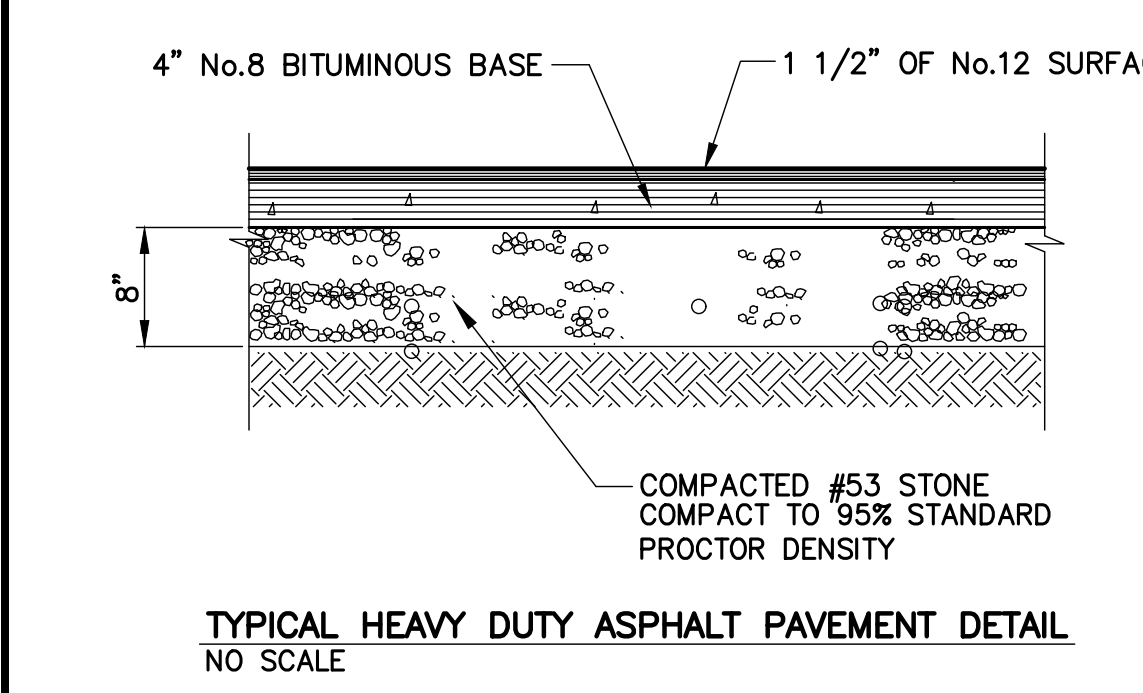
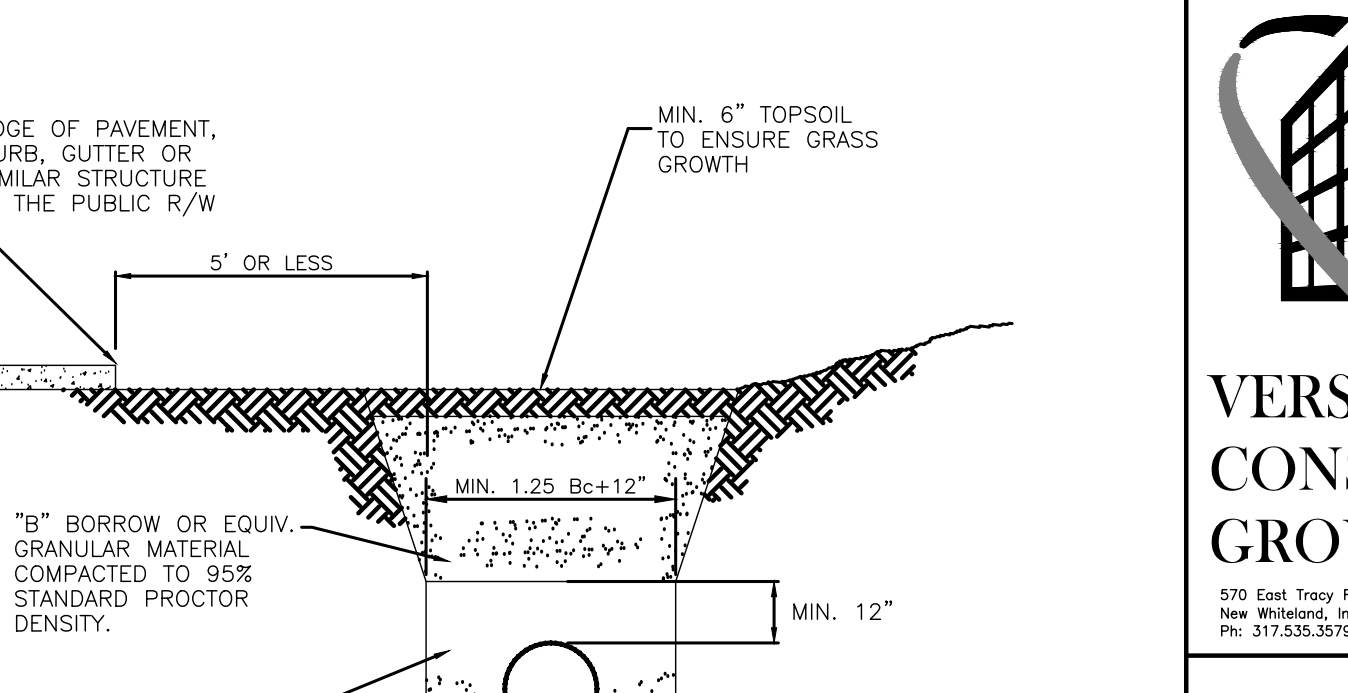
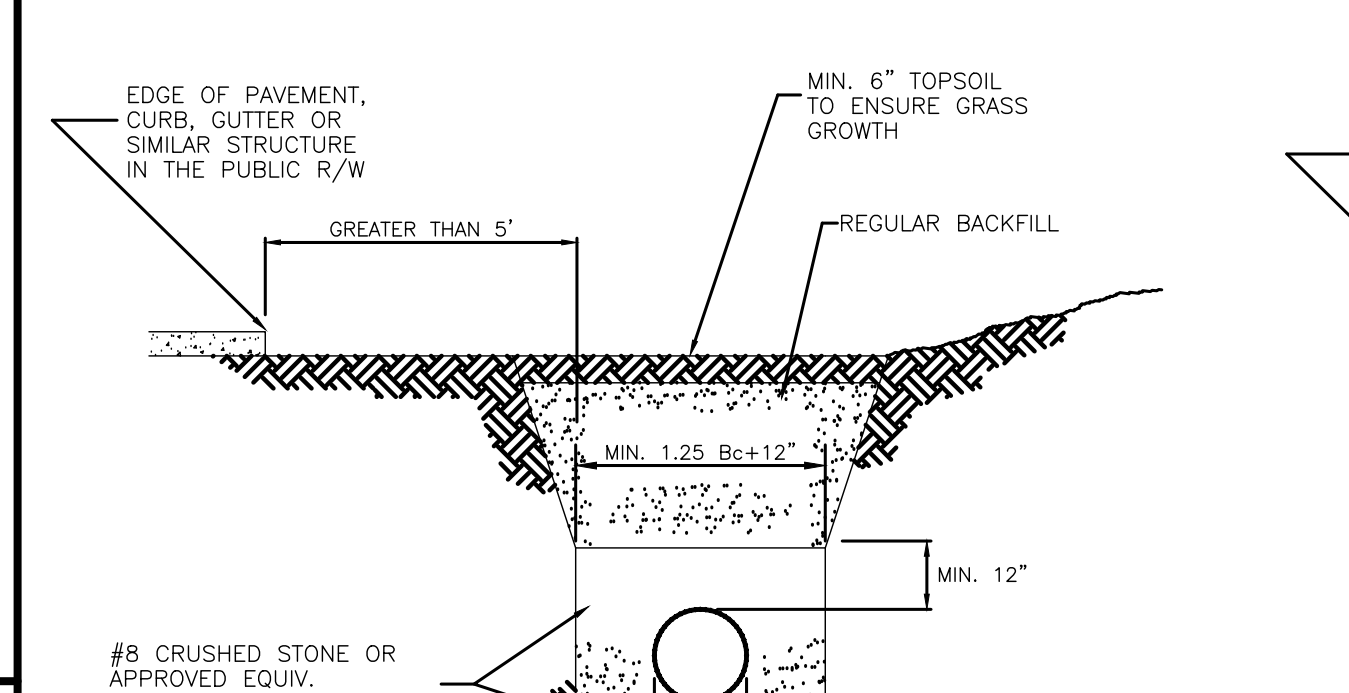
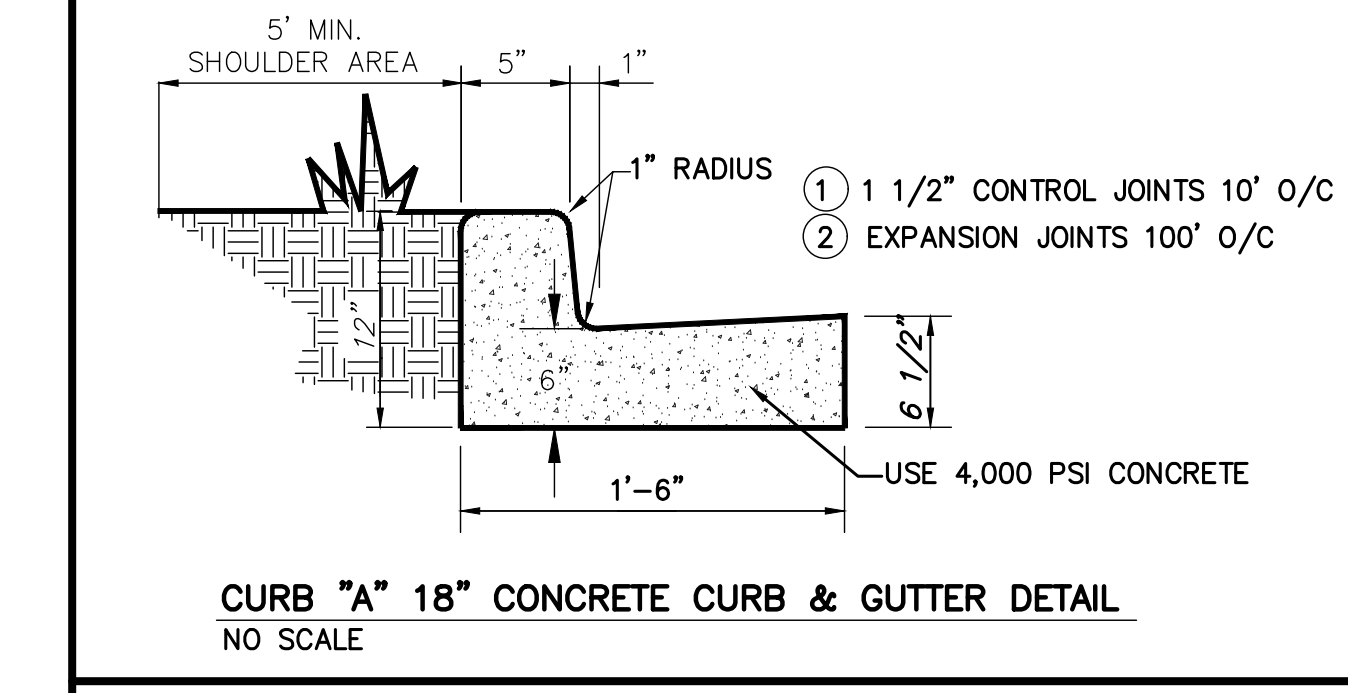
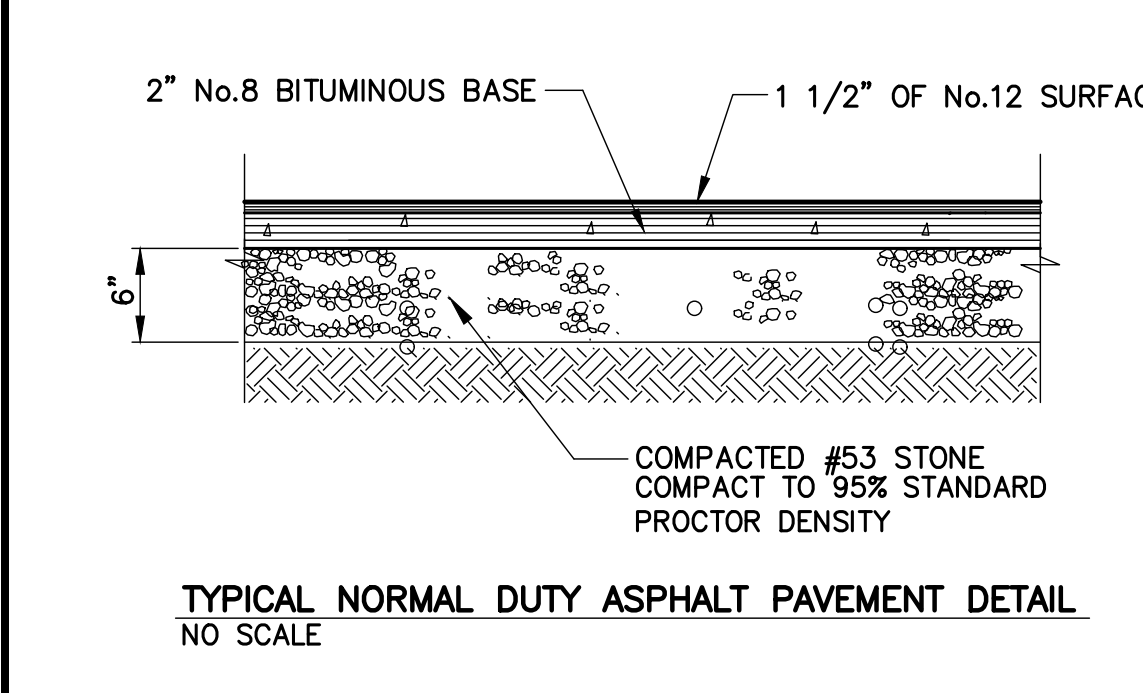
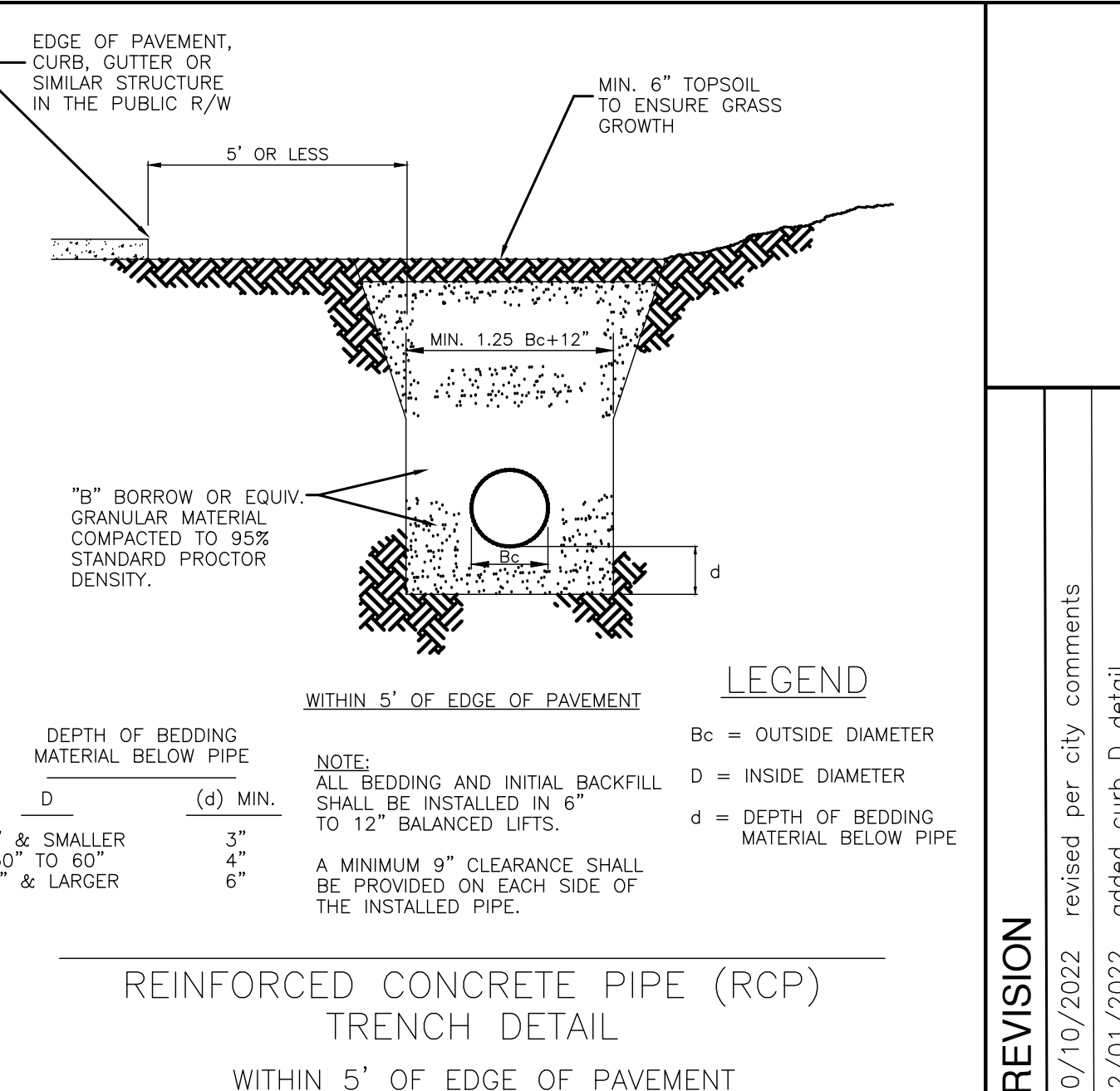
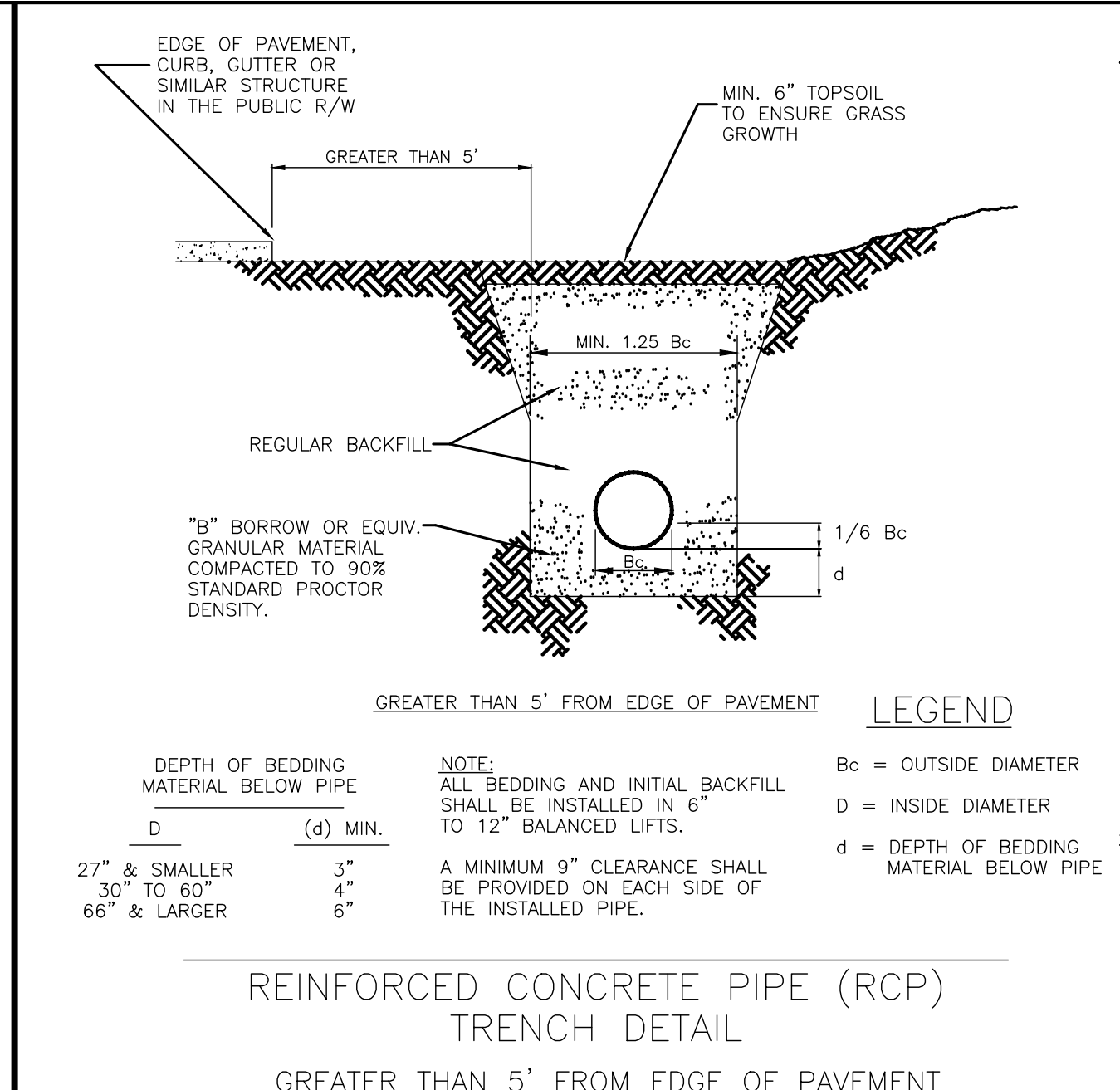
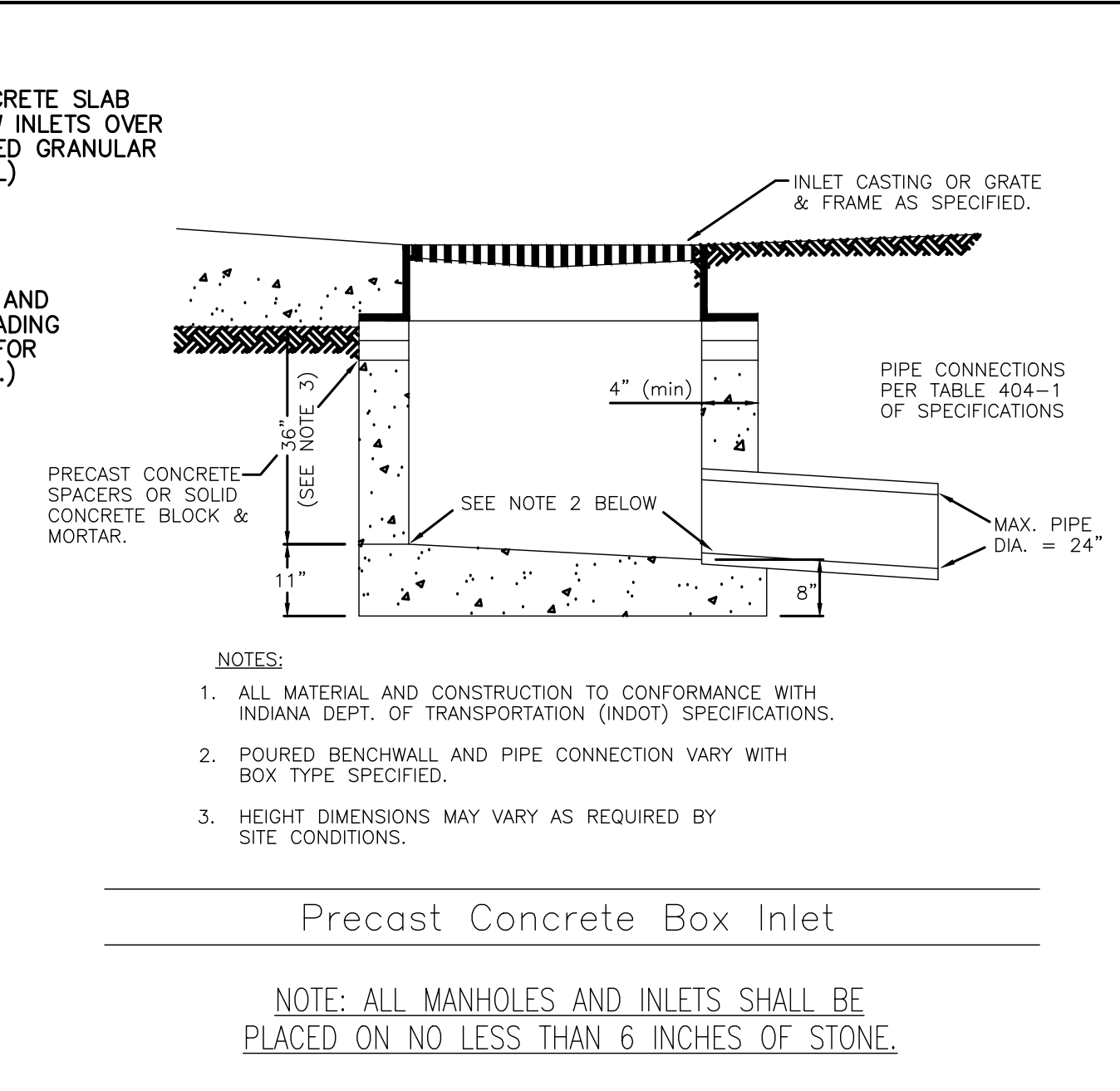
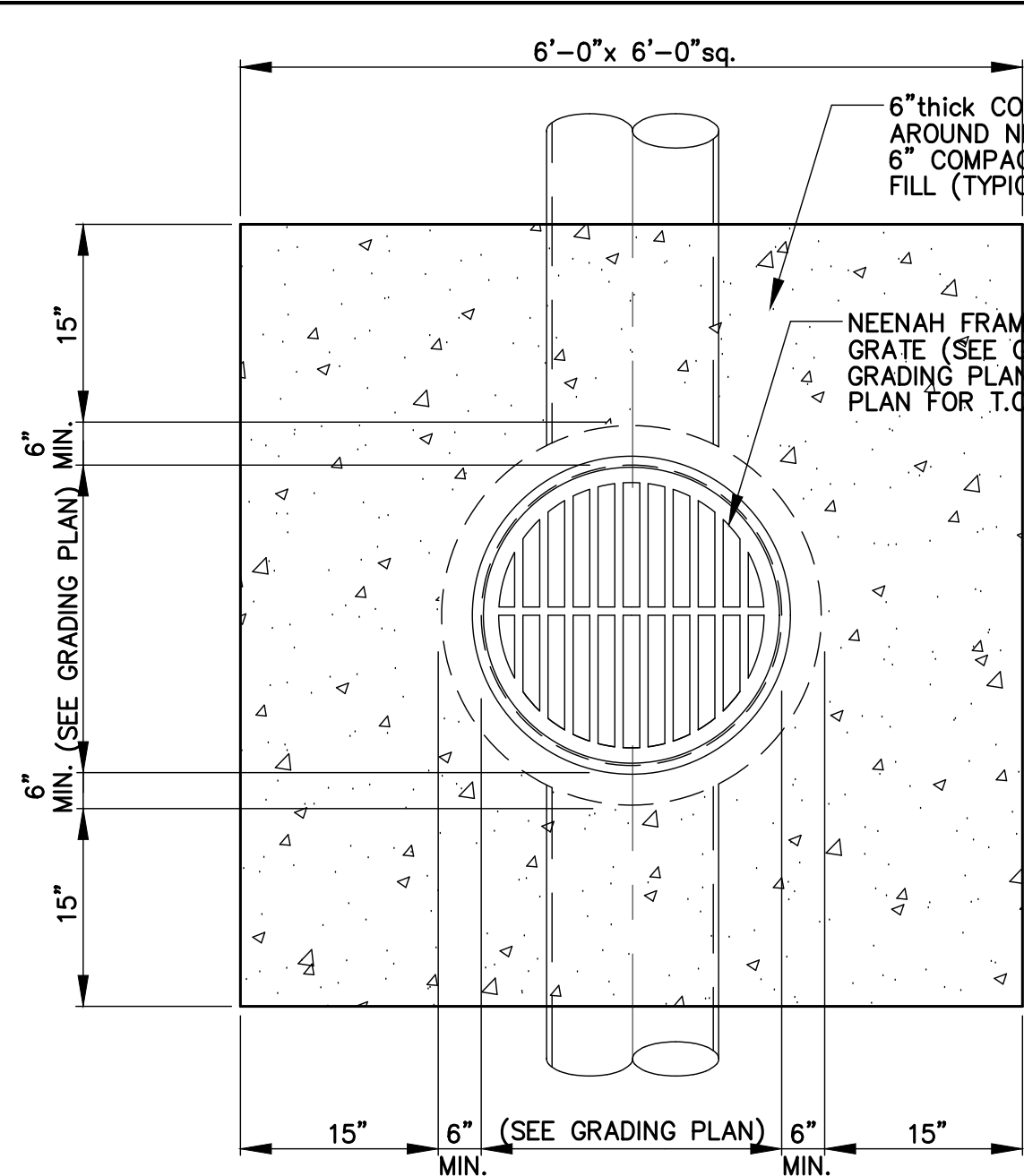


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SHEET TITLE:
C520



**TYPE 6" dia. PIPE BOLLARD
DETAIL**
SCALE: NO SCALE



REVISION	DATE	DESCRIPTION
10/10/2022		revised per city comments
12/01/2022		added curb D detail

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Harmony Pointe
1335 S. Waterleaf Drive
Westfield, Indiana 46074
General Sitework Details

Job No.: 21068	Date Stamped: 08/15/2022
Drawn By: caw	Checked By: tab
Scale: 1" = 10.0'	

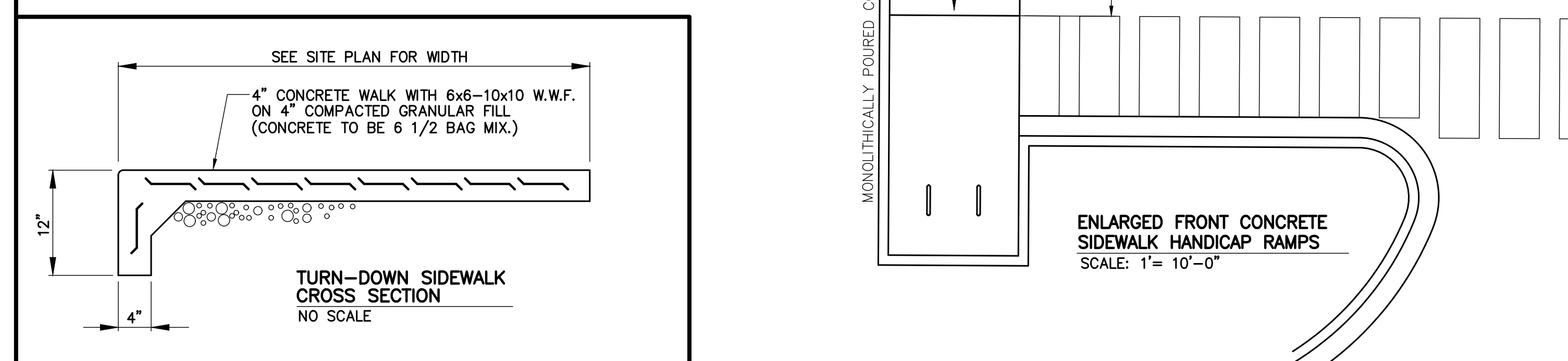
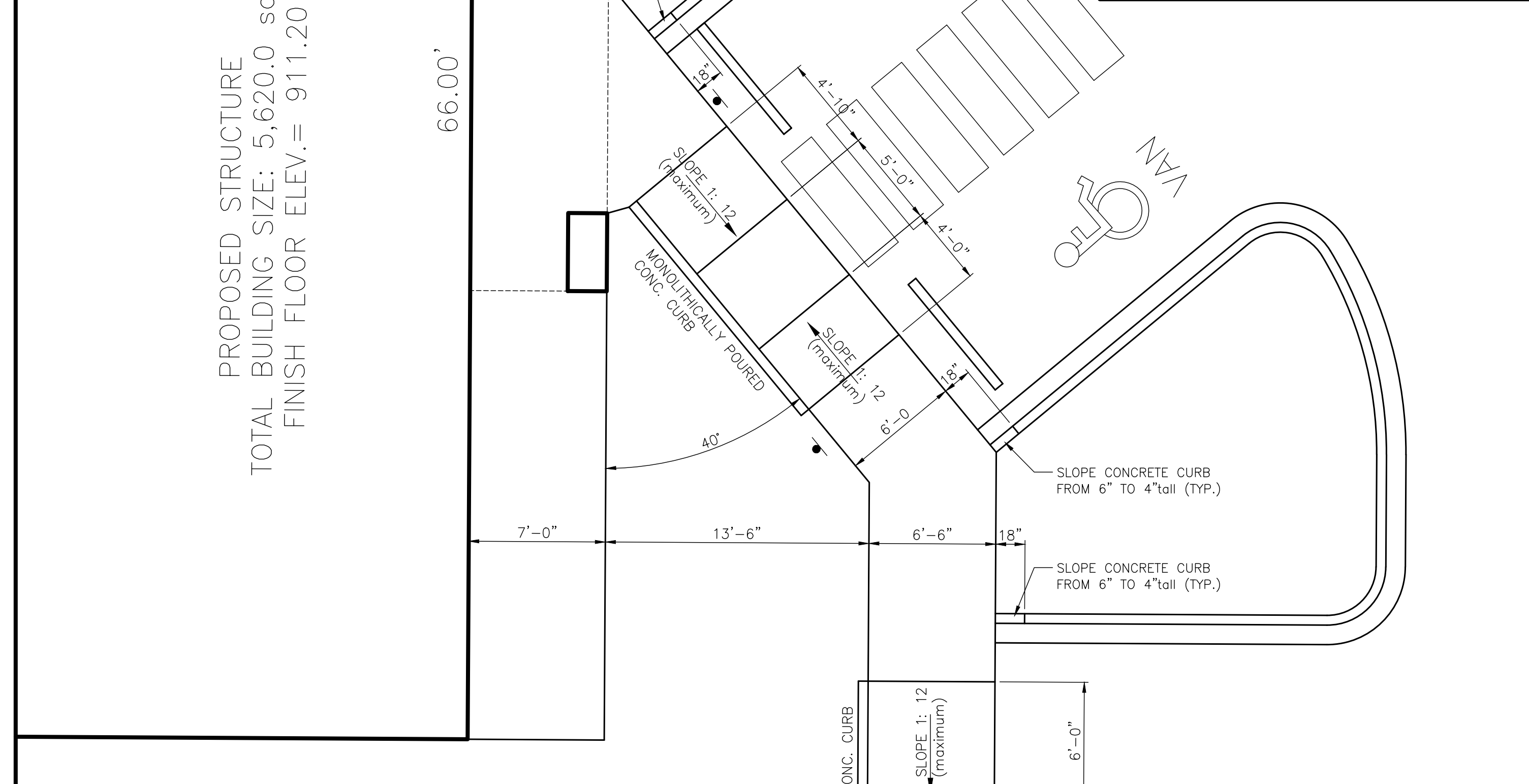
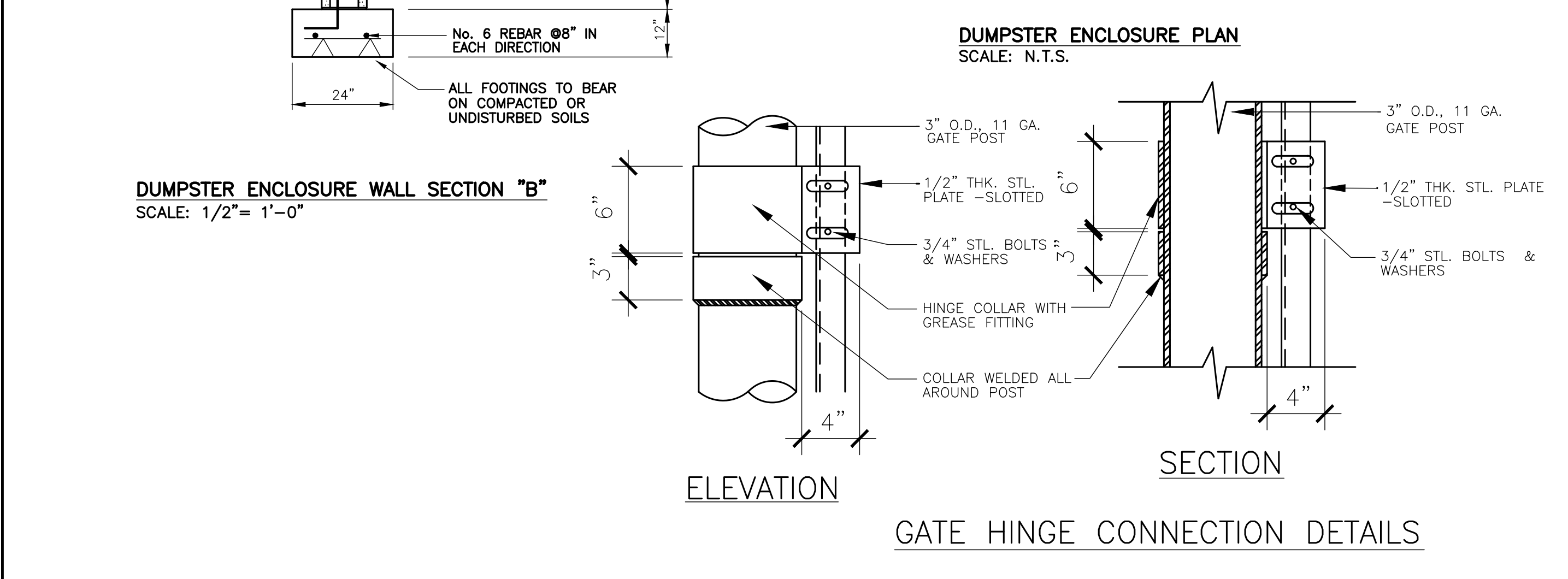
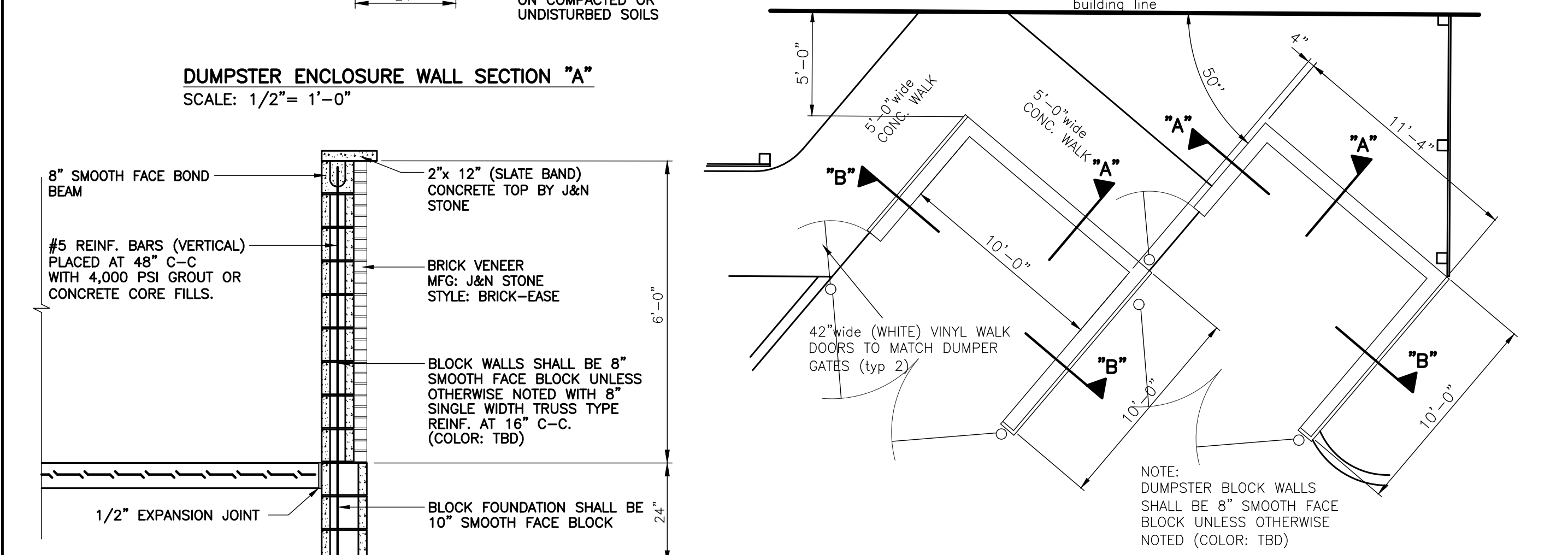
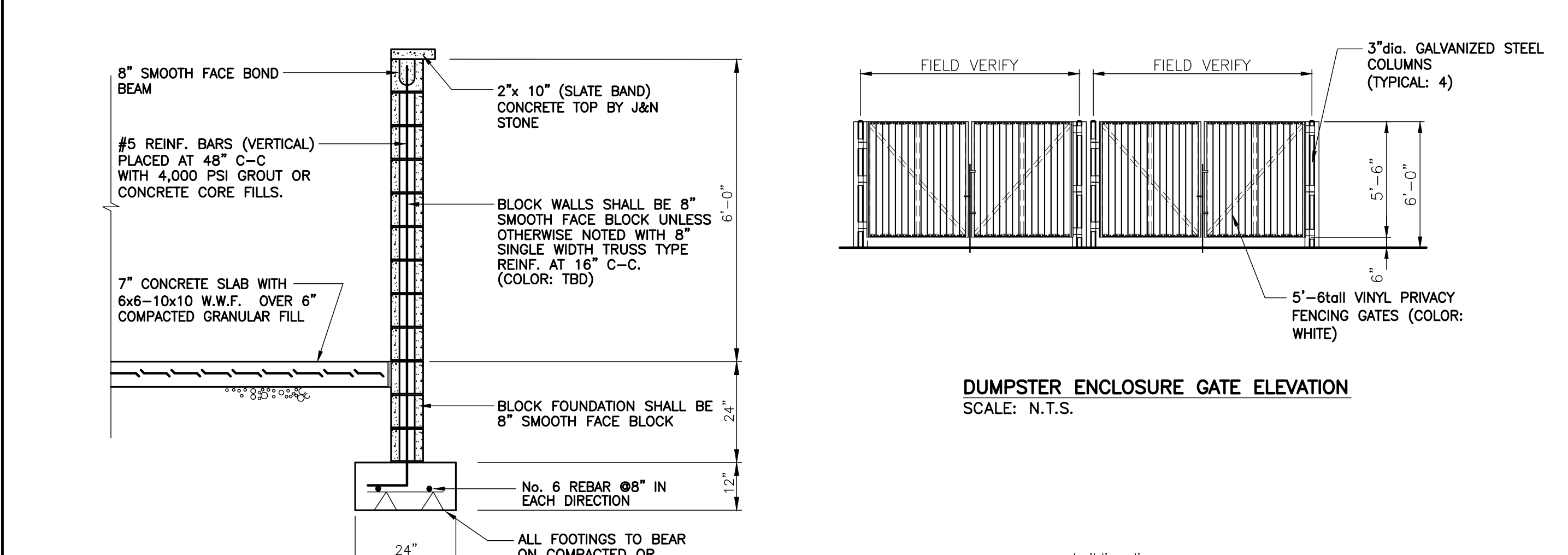
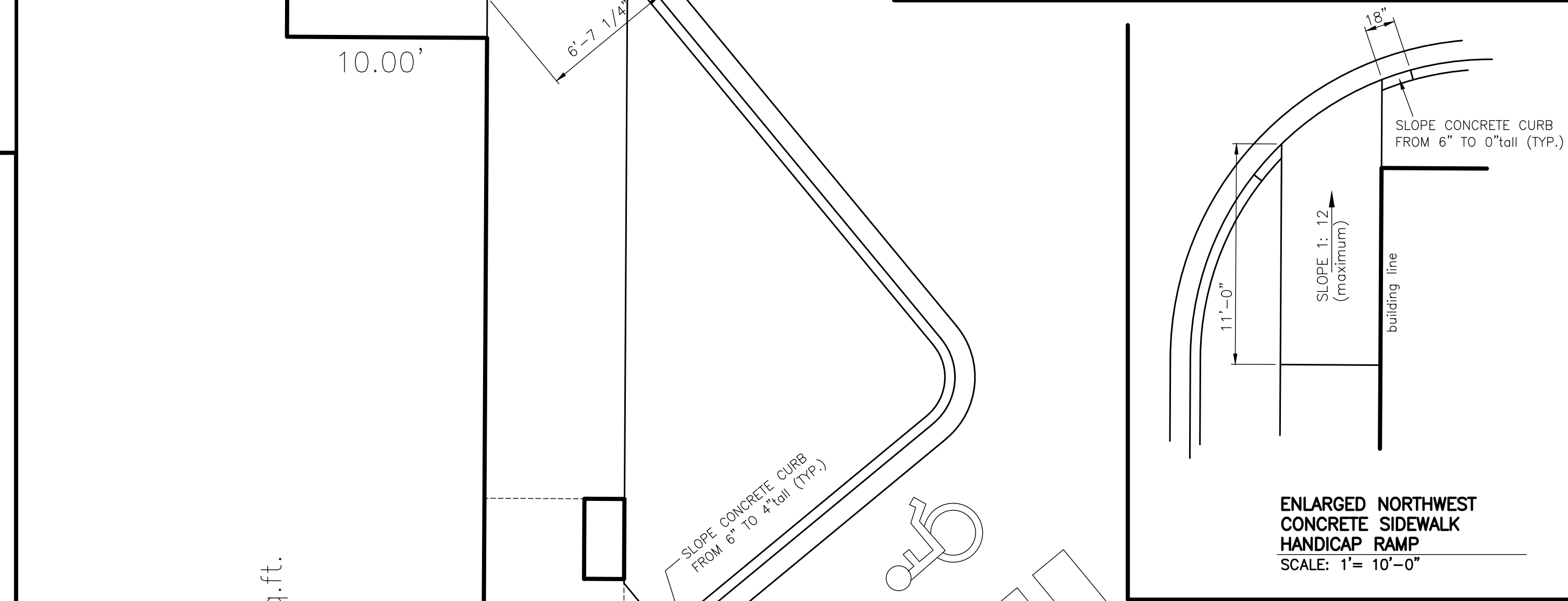
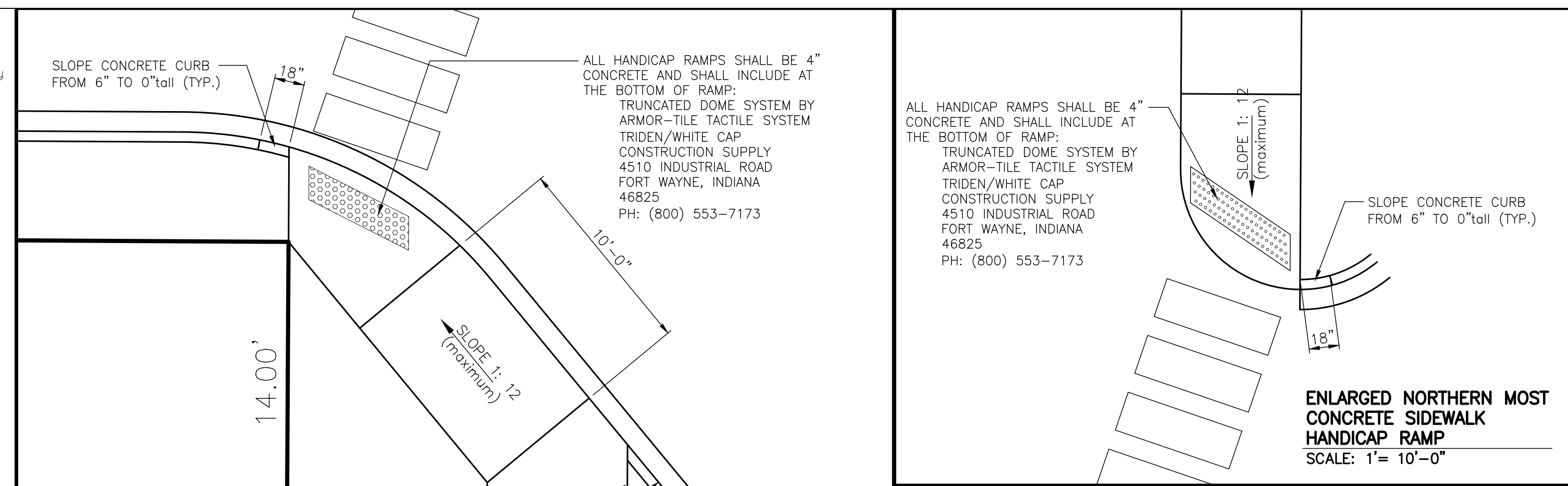
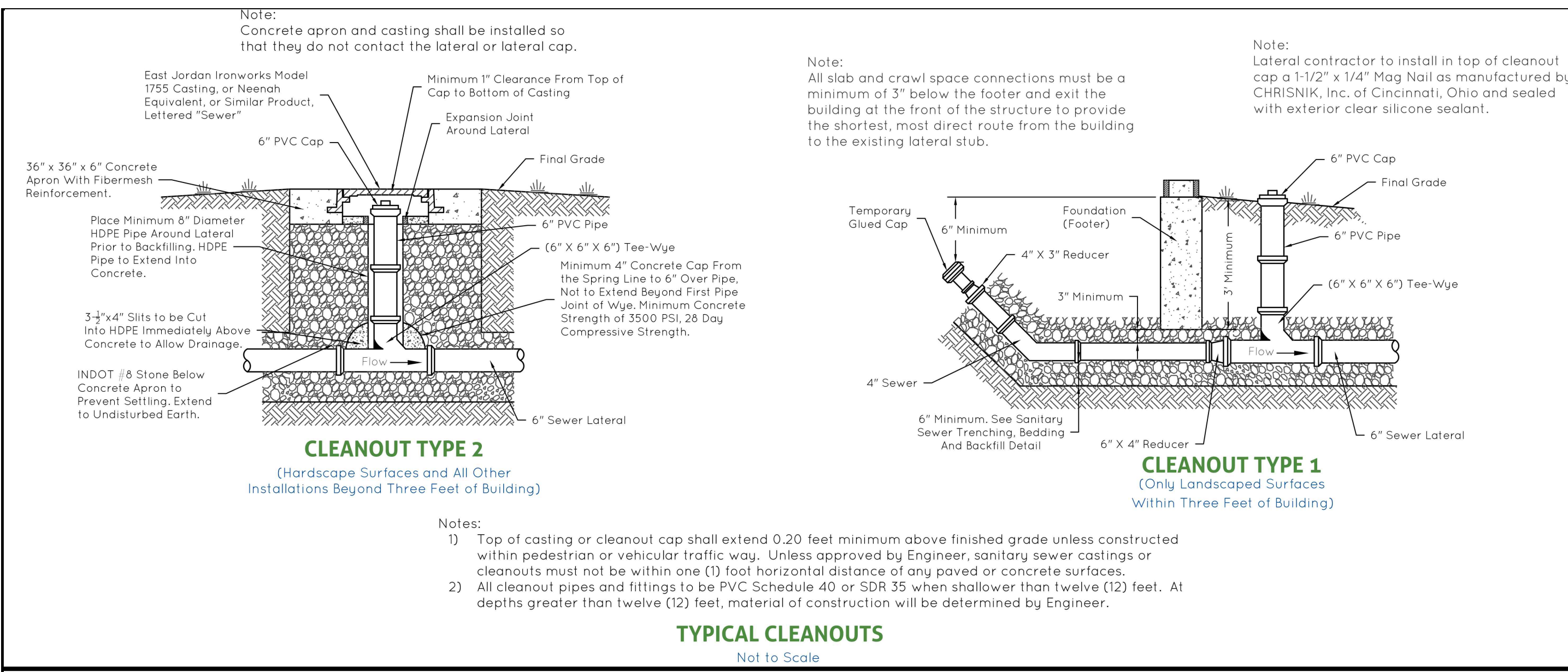
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TRENT A. BAKER
REGISTERED PROFESSIONAL ENGINEER
No. 19700309

CERTIFIED BY:

NOTE: HANDICAP PARKING SIGN SHALL CONFORM WITH CURRENT STATE & LOCAL CODES AND REGULATIONS.

SHEET TITLE:
C600



REVISION	DATE	DESCRIPTION
10/10/2022	revised per city comments	
10/18/2022	revised per city comments	

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PH: 317.535.3579 Fax: 317.535.3581

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1335 S. Waterleaf Drive
Westfield, Indiana 46074

General Sitework Details

Job No.: 21068	Date Stamped: 08/15/2022
Drawn By: caw	Checked By: tab
Scale: 1" = 10.0'	

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SHEET TITLE: **C610**

GENERAL: WHEREVER A CONFLICT OR DEFICIENCY OCCURS BETWEEN THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THIS IMMEDIATE PROJECT AND THE CONSTRUCTION STANDARDS AND SPECIFICATIONS ADOPTED BY THE LOCAL GOVERN AGENCIES, THE HIGHER OR MORE RESTRICTIVE STANDARD OR SPECIFICATION SHALL APPLY.

A. STANDARD CONDITIONS

- The Contractor shall be responsible for obtaining or verifying that all permits and approvals are obtained from the respective city, county and state agencies prior to starting construction.
- It shall be the responsibility of each utility, contractor and/or sub-contractor to obtain all permits and approvals to open cut any road from the appropriate department.
- It shall be the Contractor's responsibility to determine the exact location of all existing utilities in the vicinity of the construction area prior to starting construction.
- It shall be the Contractor's responsibility for notification and coordination of all construction with the respective utility companies.
- It shall be the responsibility of the Developer and Contractor to maintain quality control throughout the project; failure to do so may result in removal and replacement of the defective work. It is recommended that the Developer have a qualified inspector on the job site at all times during construction.
- It is essential that the work be done in conjunction with this project shall be installed according to these specifications. The engineer will be required to certify to certain portions of this project upon completion. Therefore, it is necessary to obtain approval and acceptance by the city, county, state or govern agency that construction was done in compliance with these plans and specifications.

B. CLEARING AND GRUBBING

- Clearing and grubbing shall consist of cutting removal and satisfactory disposal of all trees, down timber, brush, projecting roots, stumps, rubbish, boulders, broken concrete, fencing (as designated), and other material on the project site and within the boundary as shown on the construction documents and/or as designed by "construction limits".
- Special instructions shall be taken to insure that trees to be left remaining in the project area shall not receive limb, bark or root injuries. When such injuries occur, all rough edges of scarred areas shall be removed in accordance with accepted horticultural practice and the scars coated thoroughly with an asphaltum base tree paint.
- All "unsuitable material" from clearing operations stoffed in items B-1 shall be removed to disposal area(s) off of the project site; unless a "bury pit" shall be utilized in an area where it shall not be beneath building areas and/or pavement areas and shall not be located in an area where storm drainage structures shall be located or where impoundment of surface drainage may occur.
- Material shall not be disposed of by burying unless approved by the local and state fire marshal.

C. TREE REMOVAL AND PROTECTION

- Trees shall only be cleared only where the area is to be occupied by road and surfaced areas in accordance with specifications of the city, county, state or govern agency.
- Trees shall be removed from the project site or buried within the project as directed by the Developer and only in the areas designated.
- Trees shall be removed from the project where they interfere directly with the placement of storm or sanitary sewers and that such excavation is or will be fatal to such adjacent trees.
- The Contractor shall endeavor to save and protect trees of value and work which do not impair construction of improvements as designated. In the event cut or fill exceeds 0.5 foot over the root area, the Developer shall be consulted with respect to protective measures to be taken, if any, to preserve such trees.
- The contractor shall be responsible for determining the method for protection of tops, trunks and roots of existing trees on the project site that are to remain. Existing trees subject to construction damage shall be boxed, fenced or otherwise protected before any adjacent work is started. Earth or material or equipment shall not be stockpiled or stored within the spread of branches. Branches which need to be removed or are broken shall be neatly trimmed and shall be covered with tree paint.

D. STRIPPING OF TOPSOIL

- The contractor shall verify that all topsoil has been removed in the areas to be occupied by roads, walks and designated building areas. Topsoil shall be removed to a depth of six (6) inches or deeper, if necessary, to remove vegetable matter where required.
- Topsoil shall be kept separated from suitable fill materials and shall not be used to fill under pavement and/or building areas. Operations. Excess topsoil shall be spoiled on the site as directed by Owner or Engineer.
- Topsoil placed on the lot shall be reasonably free from subsoil debris and stones.

E. GRADING

- The contractor shall perform all grading operations to bring subgrades, after final compaction, to the required grades and sections of site improvements.
- Subgrade shall be proofrolled with suitable equipment and all spongy and otherwise unsuitable material shall be removed and replaced with suitable material.
- Subgrade shall be prepared in compliance with I.N.D.O.T. Standard Specifications, latest Edition - Section 207, as revised, with the city, state or govern agencies approving the subgrade before paving.
- All fill materials shall be formed from soil free of deleterious material. Prior to placement of fill a sample of the proposed fill material should be submitted to the soils Engineer for his approval.
- All fill material in areas outside of building and pavement areas shall be compacted lightly and protected from erosion by one or more of the methods of item C, areas for building and pavement construction shall not have unsuitable material placed in the location and fill shall be compacted to 95% Standard Proctor. These areas shall be determined by the Developer's representative.

F. SANITARY SEWERS

- GENERAL
 - Current city, state or govern agencies specifications shall prevail as to materials and methods of construction.
 - The contractor shall be responsible for obtaining or verifying all permits for all of portions of this project prior to starting construction.
 - Sanitary sewers shall be installed in accordance with the Indiana Department of Environmental Management (Division of Water Management).
 - None of the sanitary sewers are to be constructed until a letter of approval from the Department of Environmental Management has been received by the Engineer. The Engineer will then contact the Developer or Contractor of the said approval.
- GRAVITY SANITARY SEWERS
 - The Department of public works currently allows the use of the following pipe materials meeting or exceeding the minimum requirements/specifications set forth herein for the construction of gravity sanitary sewers:
 - Polvinyl Chloride Pipe (PVC)
 - Ductile Iron Pipe (DIP)
 - Vitrified Clay Pipe (VCP) is NOT an approved material for the construction of sanitary sewers.

F. (CONTINUED)

- In general, all gravity sanitary sewer pipe shall be the bell and spigot type with elastomeric seal joints and smooth interior walls meeting or exceeding all requirements set forth in the latest ASTM standard reference herein.
- THE DEPARTMENT DOES NOT ALLOW THE USE OF SOLVENT CEMENT JOINT FOR GRAVITY SANITARY SEWERS EIGHT (8) INCHES IN DIAMETER OR LARGER.
- Each length of pipe shall be marked per the requirements of the respective ASTM standard reference herein.
- GRAVITY SANITARY SEWERS MATERIALS
 - Polyvinyl Chloride (PVC) gravity sanitary sewer pipe shall be the integral wall bell and spigot type with elastomeric seal joints and smooth interior walls meeting or exceeding all requirements set forth on ASTM F-679 for pipe diameters greater than 15 inches.
 - For diameters 15 inches or less, the pipe shall have a minimum cell classification of 12454-B or 12454-C and for diameters greater than 15 inches, the pipe shall have a minimum cell classification 12454-C; with all pipe having a minimum tensile strength of 3450 MPA as defined in ASTM D-1784.
 - PVC sanitary sewer pipe shall have a minimum stiffness of 46 PSI for each diameter when measured at 5% vertical ring deflection and tested in accordance with ASTM D-2412.
 - Polyvinyl Chloride (PVC) ribbed sewer pipe meeting or exceeding requirements set forth in ASTM F-949-86a or ASTM F-794 is acceptable. The minimum cell classification acceptable shall be 12454-B or 12454-C as defined in ASTM D-1784. PVC ribbed sewer pipe shall have a minimum pipe stiffness of 50 psi when measured in accordance with ASTM D-2412.
 - Design: The minimum wall thickness for PVC sewer pipe and lateral sewer pipe 15" inches or less in diameter shall conform to SDR-35 Type PSM as specified in ASTM D-3034. The minimum wall thickness for PVC sewer pipe greater than 15" inches in diameter shall conform to T-1 as specified in ASTM F-679.
 - Markings: the date of manufacture, class of pipe, specification designation, size of pipe, name of trademark of manufacturer, and identification of plant location shall be legible marked on the outside of each pipe section in accordance with the ASTM D-3034.
 - Certification: The contractor upon request shall furnish the Department with manufacturer's certification stating that the pipe meets or exceeds all requirements of the applicable ASTM standards and these standards.

a. Joints

- Flexible gasketed joints shall be compression type so that when assembled, the gasket inside the bell will be compressed radially on the pipe spigot to form a watertight seal. The assembly of joints shall be in accordance with pipe manufacturer's recommendations and ASTM D-3212. The gasket sealing the joint shall be made of rubber; of special composition having a texture to assure a watertight and permanent seal, and shall be the product of a manufacturer having at least (5) five years experience in the manufacture of rubber gaskets for pipe joints. The gasket shall be a continuous ring of flexible joint rubber of a composition and texture which is resistant to common ingredients of sewage, industrial wastes and groundwater, and which endure permanently under the conditions likely to be imposed by this service. The gasket shall conform the requirements of ASTM F-477.
- NO SOLVENT CEMENT JOINTS SHALL BE ALLOWED.

b. Fittings

- Only manufactured fittings made of PVC plastic having a cell classification of 12454-B or 12454-C as defined in ASTM D-1784 shall be used.
- Saddle connections shall not be allowed for new construction.

b. DUCTILE IRON PIPE

- Material: Ductile iron pipe in diameters from eight (8) inches through thirty six (36) shall be centrifugally cast and shall conform to ANSI Specifications A-21.51 and AWWA C-151 latest revision. Ductile iron pipe shall be class 50, 51, 52 or 54 wall thickness dependent upon site conditions and provided in minimum laying lengths of eighteen (18) feet. Ductile iron pipe larger than thirty six (36) inches in diameter shall be approved on a case by case basis by the department.
- Fittings: Fittings shall be standardized far type the pipe of pipe and joint specified and shall comply with ANSI A-21.10, AWWA C-110.
- Joints: Mechanical joints, slip or flanged joints shall be provided.
- Weights and Marking: Weights of pipe fittings shall conform strictly to requirements of ANSI Specifications. The class designations for the various classes of pipe and fittings shall be cast onto fittings in raised numerals, and cast or stamped on the outside of each joint of pipe. Weights shall be plainly and conspicuously pointed in white on the outside of each joint of pipe and each fitting after the exterior coating has hardened.

4. Bedding and Backfill-Sanitary Sewers

- The following section provides the minimum requirements for the bedding of pipe and the backfilling of the trench.
- Bedding-Sanitary Sewers
 - Trenching where the bottom of the trench is of undesirable material, an additional six(6) inches of trench bottom shall be excavated and a stable foundation shall be constructed using compacted No. 2 crushed stone.
 - All sanitary sewer pipe shall be laid to the lines and grade shown on the approved design plans unless otherwise approved by the department.
 - Bedding material shall be compacted No. 8 crushed stone or No. 8 fractured face aggregate and shall be placed the trench bottom such that after the pipe has been placed therein, imbedded to grade and aligned, there remains a 4-inch minimum depth of material below the pipe barrel and a minimum of 3-inches below the bell.
 - The bell holes shall be excavated so that the entire pipe bored rests on the bedding. The following presents the bedding requirements for each pipe classification:
 - Flexible Pipe: PVC Pipe
 - No. 8 crushed stone or No. 8 fractured face aggregate shall be placed around the sides of the pipe up to the sides of the pipe to the springline(1/2 the outside diameter). This material shall be shovel sliced or otherwise carefully placed and "walked" or hand tamped in to ensure compaction of the haunch area and complete filling of all voids. From the springtime to twelve(12) inches above the crown of the pipe, bedding shall be added in six(6) lifts "walked" in for compaction. Backfilling of the remainder of the trench shall be as specified in the section
 - Semi-Rigid Pipe: Ductile Iron Pipe
 - No. 8 crushed stone or No. 8 fractured face aggregate shall be placed around the sides of the pipe up to the springline (1/2 the outside diameter). This material shall be shovel sliced or otherwise carefully place and "walked" or hand tamped in to ensure compaction of the haunch area and complete filling of all voids.
 - From springline to six(6) inches, of 1/2 the outside diameter above the top of the pipe, whichever is larger, bedding shall be added in six(6) inch lifts "walked" in for compaction.
 - Backfilling of the remainder of the trench shall be a specified later in the section.
 - Backfilling Sanitary Sewers
 - Backfill Materials
 - The following materials shall be used to backfill the trenches in accordance with and in the manner indicated by the requirements specified herein:

F. (CONTINUED)

- Class 1 Angular, six(6) to forty(40) millimeters(1/4 to 1 1/2 inch) graded stone such as crushed stone.
- Class 2 Course sands and gravel with maximum particle size forty (40) millimeters (1 1/2 inch), including variously graded sands and gravel containing small percentages of fines, generally granular and non-cohesive, either wet or dry. Soil types GW, GP, SW and SP are included in this class.
- Class 3 Fine sand and clay gravel, including fine sands, sand-clay mixtures and gravel-incl. soil mixtures. Soil types GM, GC, SM and SC are included in this class.
- Class 4 Silt, silty clays and clays, including silts of medium to high plasticity and liquid limits. Soil types MH, ML, CH, and CL are included in this class. These materials are not recommended for bedding.
 - Backfill Around Pipe (bedding): Bedding and backse materials shall be placed prior to construction by the Engineer and the Contractor. Sample will be obtained and kept at the Engineer's office. No significant deviation from this material will be permitted for use without authorization by the Engineer and the Department.
 - The term "select fill" shall mean the use of Class 2 or 3 backfill materials as described above.
- Areas Subject to Vehicular Traffic
 - In areas under proposed or existing paved roads or within five feet of pavement, sidewalks, curbs, gutters or other structures, granular backfill material complying with the requirements of the Indiana Department of Transportation Standard Specifications, latest Edition, as revised, shall be used.
 - The material shall be placed in uniform layers not six(6) inches, loose measurement. Within three(3) feet of the sanitary sewer pipe the backfill material shall be thoroughly and uniformly compacted with hand held mechanical tampers. The remaining backfill material shall be compacted with mechanical tampers. A minimum compaction of 95% percent Standard Proctor Density shall be achieved within the backfill material.

5. Workmanship

- Laying of Pipe in Cold Weather
 - The Engineer reserves the right to order pipe installation discontinued whenever, in our opinion, there is danger of the quality of work being impaired because of cold weather. The Contractor shall be responsible for heating the pipe jointing material so as to prevent freezing of joints.
 - Do not lay any pipe on frozen ground. No flexible or semi-rigid pipe shall be laid when the air temperature is less than 32 F unless proper precautions per the manufacturer's recommendations are taken by the Contractor and the method is approved by the Engineer and Department.
 - When pipes with rubber gaskets or resilient-type are to be laid in cold weather, sufficiently warm the gasket or joint material so as to facilitate making a proper joint.
- Abandoned Sewers
 - Sewers and storm water drains which are to be abandoned shall be bulkheaded with mortar and an eight(8) inch thick brick wall. Sewers, storm water drains, and sewer structures which are to be abandoned in place shall be filled with Sand or Cellular Concrete and plugged, unless otherwise indicated on the Plans.
 - Service shall be maintained in such sewers and drains until the Department shall order bulkheads placed. No timber bulkheads shall be allowed. All castings on such abandoned structures are the property of the Department and shall be salvaged by the Contractor and delivered as directed. Unless otherwise specified, all abandoned manholes, catch basins, and inlets shall be removed to a depth of three(3) feet below the proposed or established grade or existing street grade, whichever is lower.
- Dewatering and Control of Surface Water:
 - Where groundwater is encountered, the Contractor shall make every effort necessary to secure a dry trench bottom before laying pipe. The Contractor shall provide, install and operate sufficient trenches, sumps, pumps, hose, piping, wellpoints, etc., necessary to depress and maintain the groundwater level below the base of the excavation. If the Contractor is unable to remove the standing water in the trench, the Contractor shall over-excavate the proposed bottom grade of the sewer bedding and place not less than three(3) inches of class No. 2 crushed stone (Indiana Department of Transportation aggregate classification) in the over-excavated area.
 - The Contractor and/or Owner shall be liable for all lawsuits which may arise as a result of the Contractor's dewatering efforts.
 - The Contractor shall keep the site free of surface water at all times and shall install drainage ditches, dikes, pumps and perform other work necessary to divert or remove surface water and other accumulation of surface water and/or groundwater shall be performed in a manner which will prevent the accumulation of water within the construction area.
 - UNDER NO CIRCUMSTANCES SHALL SURFACE WATER AND/OR GROUNDWATER BE DISCHARGED TO, DISPOSED OF OR ALLOWED TO FLOW INTO THE CITY'S SANITARY SEWER SYSTEM.

d. Trenching

- The width of the trench at and below the top of the sanitary sewer shall be only as wide as is necessary for proper installation and backfilling, and consistent with safety requirements. The minimum width of trench for sanitary sewers, including force mains, 42"-inches in diameter and less shall be 1.25 times the outside diameter (O.D.) plus 12"-inches:
Minimum Trench Width (inches)= 1.25 (O.D.)+12
- The minimum trench width for sanitary sewers larger than 42"-inches in diameter shall be determined on a case by case basis by the Engineer and approved by the department.
- The design plans and specifications submitted to the Department for review, approval and issuance of a construction permit shall include a detailed trench drawing.
- The design of the sewer pipe and structures is predicated upon the width of trench indicated above and, should these limits be exceeded, the Contractor shall be responsible for the provision and installation of such remedial measures as may be required by the Engineer and/or the Department.
- Bell holes shall be excavated for bell and spigot pipe mechanical joint pipe so that the entire barrel of the pipe shall rest on the bedding.
- The pipe trench shall not be excavated more than one hundred(100) feet in advance of pipe laying.
- Whenever pipe trenches are excavated below the designed bedding bottom, the Contractor shall fill the over-excavated with mechanically compacted No. 8 (1/4 inch to 3/4 inch) crushed stone or No. 8 fractured face aggregate.
- All rock, boulders and stones 6"-inches in diameter and larger encountered in trenches shall be removed.
- Boulders or rocks are not to be used for trench backfill.
- In cases where material is deposited along open trenches, the material shall be placed so that no damage will result to the work or adjacent property as a result of rain or other surface wash.

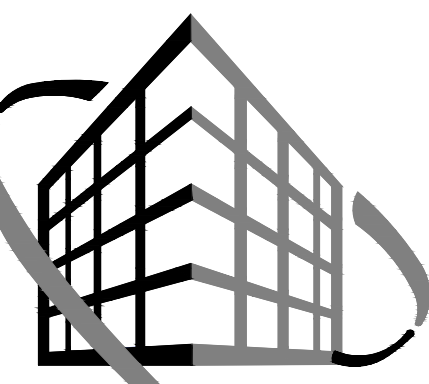
F. (CONTINUED)

- If the bottom of the trench is of undesirable material, an additional six(6) inches of trench bottom shall be excavated and filter layer of crushed stone or compacted using a hand held mechanical tamper. Where the distance to stable ground is excessive, the Engineer shall order in trenches of types of foundation as he deems necessary subject to the approval of the Department.
- Remove any rock(s) encountered within six(6) inches below the barrel of the pipe, replace with No. 8 crushed stone or No. 8 fractured face aggregate and compact.
- Trench Box Pulling and Sheeting
 - When required by the Occupational Safety and Health Act (OSHA) to protect life, property, or the work, sheet, and brace all open cut trenches in accordance with GFR 1926. Upon completion of the work, all temporary forms, shores, and bracing shall be removed. Vacancies or voids by the sheeting while being withdrawn, shall be carefully filled with bedding material.
 - The Contractor shall employ adequate safeguards to prevent movement of the pipe joint. If any movement should occur, the Contractor shall reinstall the pipe.
 - Any damage to pavement or other structures due to sheeting , shoring, or bracing shall be repaired by the Contractor at his own expense.
 - Sheeting and bracing which is to remain place shall be cut off at the elevation of 1.5 feet above the top of the sewer pipe.
- Line and Grade
 - The Contractor shall furnish and set all line and grade stakes (HUB) and stakes for bench marks. The bench marks shall be set in strategic locations of the project in order to facilitate the Contractor's installation of line and grade stakes (HUB) for each pipeline. Only the laser method shall be used to set the grade of the pipeline. Any other method must first be approved in writing by the Department. The Contractor shall constantly check line and grade of the laser beam and the pipe.
 - Installation of Sanitary Sewers: Suitable tools and equipment shall be used for the safe and convenient handling and laying of pipe. Great care shall be taken to prevent pipe coating or wrappings from being damaged. Carefully examine all pipe for cracks and other defects.
 - No pipe or fittings shall be laid which are known to be defective. If pipe or fittings are discovered to be cracked, broken or defective after being laid, they shall be removed and replaced with good material.
 - Thoroughly clean all pipe and fittings before installation. All pipe and appurtenances should be kept clean until accepted and completed work.
 - All field-cutting shall be done in a neat, trim manner using a hand or power saw and the cut end shall be beveled using a file or wheel to produce a smooth bevel of approximately 15° and be a minimum depth of one third the pipe wall thickness. Field cut pipe will only be allowed to be installed at manholes, at prefabricated trees and wyes, and at the connection of new sanitary sewer to existing sanitary sewer.
 - NOTE: Only smooth exterior pipe shall be used at manhole connections.
- Point of Commencement and Direction of Laying
 - The point of commencement for laying of sewer pipe shall be the lowest point in the proposed sewer line. Lay the pipe with the bell end of bell and spigot pipe or with the receiving groove end of tongue and groove pipe pointing upgrade. Any other procedure shall be followed only with permission of the Department.
 - Lay each pipe on an even firm bed as specified so that no uneven strain is placed on any part of the pipe. Particular care shall be exercised to prevent the pipes from bearing on the sockets. Dig all bell holes for bell and spigot pipe.
 - Completely shove home all pipe (to the assembly mark) On pipe of the line prove type thirty(30) inches and larger in diameter, pressure must be applied to the center of each pipe as it is laid by a winch and cable or other mechanical means.
 - All connection fittings shall be sealed with watertight stopper.
 - The Contractor shall extend the building wye lateral to the right-of-way and shall place a one(1) inch cast iron/castor rod or magnetic location tape above the end of the pipe to within three(3) feet of the ground surface. The purpose is to provide for ease of location of the wye stub.
- Construction Bulkheads
 - Before extending a sanitary sewer, the Contractor shall provide a watertight bulkhead in the existing sewer immediately adjacent to the point of connection. This bulkhead shall be left in place until the new sanitary sewer has been cleaned of all accumulated water and debris and accepted by the Department.
 - During all intermissions in construction of the sanitary sewer pipe, the open face of the last pipe laid shall be plugged, covered or bulkheaded so as to prevent wind, water, earth or other materials from entering the pipe. Whenever pipe and special castings are required to be cut, the cutting shall be done by skilled workmen in such manner as to leave a smooth end at right angles to the axis of the pipe without damage to the pipe casting or cement lining. CUTTING TORCHES SHALL NOT BE USED.
- RELATIONSHIP TO WATER MAINS
 - Horizontal Separation
 - Sewers shall be laid at least 10 feet (3.0 m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten foot separation, the appropriate reviewing agency may allow deviation on a case-by-case basis, if supported by data from the design engineer such deviation may allow installation of the sewer closest to the water main, provided that the water that the water main is in a separate trench or on an undrained water main self located on one side of the sewer and at an elevation so the bottom of the water main is at least 18 inches (46 cm) above the top of the sewer.
 - Crossings
 - Sewer crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main.
 - Special Conditions
 - when it is impossible to obtain proper horizontal and vertical separation is stipulated above, the sewer shall be designed and constructed equal to water pipe, and shall be pressure tested to assure watertightness prior to backfilling.
- Testing Gravity Sanitary Sewers
 - General
 - The contractor shall bear the complete cost and supply all equipment necessary to perform the test required.
 - All test shall be conducted under the observation of the Department's Observer. It shall be the Contractor's responsibility to schedule testing with the Observer.
 - Certifications: The Contractor upon request shall furnish the department with certified reports stating that inspection and specified test have been made and that the results thereof comply with the applicable ANSI Specifications and these standards for each.

F. (CONTINUED)

- Infiltration/Exfiltration Test
 - Once constructed, all sanitary sewers and manholes watertight and free from leakage. The rate of infiltration into the sanitary sewer system between any two adjacent manholes or the entire system shall not be in excess of 100 gallons per inch of pipe diameter per mile per day (100 gpd/in./mi). The Contractor shall be required to repair all visible leaks to satisfaction of the Department, even if the infiltration requirements are met.
 - Any leakage found during the infiltration test shall be corrected by the Contractor at his expense. The method of repair shall be per the approval of the Department; however, grouting of the joint or crack to repair the leakage shall not be permitted. If the defective portion of the sanitary sewer cannot be located, the Contractor shall remove and reconstruct as much of the work as is necessary to obtain a system that passes infiltration requirements.
- Deflection Test
 - All gravity sanitary sewers constructed of flexible pipe (PVC) shall be mandrel tested no sooner than thirty (30) days after installation. The deflection limit is 5% of the inside diameter of the pipe. Mandrel must be pulled through by hand with no mechanical device. Any failed section of pipe shall be reinstated by the Contractor at no cost to the owner.
- Low Pressure Air Test (Gravity Sewer)
 - All gravity sanitary sewers shall be tested for infiltration by means of a low pressure air test. A minimum of 5 p.s.i. must be maintained in the pipe for a period of no less than 5 minutes

REVISION



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Westfield, Indiana 46074

General Notes

Job No.: Date Stamped:

21068 08/15/2022

Drawn By: Checked By: Scale:

caw tab

CAD FILE:

G:\21068\c800 general notes.dwg



CERTIFIED BY:
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C700