



COMMUNITY DEVELOPMENT DEPARTMENT

45175 Ten Mile Road
Novi, MI 48375
(248) 347-0415 Phone
(248) 735-5600 Facsimile
www.cityofnovi.org

ZONING BOARD OF APPEALS STAFF REPORT

FOR: City of Novi Zoning Board of Appeals **ZONING BOARD APPEALS DATE:** May 9, 2023

REGARDING: 29580 Hudson Drive, Parcel # 50-22-04-378-004 (PZ23-0011)

BY: Alan Hall, Deputy Director Community Development

I. GENERAL INFORMATION:

Applicant

Copper Rock Construction

Variance Type

Dimensional Variance

Property Characteristics

Zoning District: This property is zoned Light Industrial (I-1)

Location: North of West Road, west of West Park Drive

Parcel #: 50-22-04-378-004

Request

The applicant is requesting a variance from the City of Novi Zoning Ordinance from Section 5.4.3 to allow two truck docks to be located in the exterior side yard off of Desoto Court.

II. STAFF COMMENTS:

III. RECOMMENDATION:

The Zoning Board of Appeals may take one of the following actions:

1. I move that we **grant** the variance in Case No. **PZ23-0011**, sought by _____, for _____ because Petitioner has shown practical difficulty requiring _____.

 - (a) Without the variance Petitioner will be unreasonably prevented or limited with respect to use of the property because _____
 - (b) The property is unique because _____
 - (c) Petitioner did not create the condition because _____

(d) The relief granted will not unreasonably interfere with adjacent or surrounding properties because _____.

(e) The relief is consistent with the spirit and intent of the ordinance because _____.

(f) The variance granted is subject to:

1. _____.

2. _____.

3. _____.

4. _____.

2. I move that we **deny** the variance in Case No. **PZ23-0011**, sought by _____, for _____ because Petitioner has not shown practical difficulty requiring _____.

(a) The circumstances and features of the property including _____ are not unique because they exist generally throughout the City.

(b) The circumstances and features of the property relating to the variance request are self-created because _____.

(c) The failure to grant relief will result in mere inconvenience or inability to attain higher economic or financial return based on Petitioner's statements that _____.

(d) The variance would result in interference with the adjacent and surrounding properties by _____.

(e) Granting the variance would be inconsistent with the spirit and intent of the ordinance to _____.

Should you have any further questions with regards to the matter please feel free to contact me at (248) 347-0423.

Alan Hall – Deputy Director Community Development - City of Novi

PZ 23-0011

RECEIVED

MAR 29 2023



Community Development Department
45175 Ten Mile Road
Novi, MI 48375
(248) 347-0415 Phone
(248) 735-5600 Facsimile
www.cityofnovi.org

CITY OF NOVI
COMMUNITY DEVELOPMENT

ZONING BOARD OF APPEALS
APPLICATION
APPLICATION MUST BE FILLED OUT COMPLETELY

I. PROPERTY INFORMATION (Address of subject ZBA Case)
PROJECT NAME / SUBDIVISION
Beck North Unit 5 Industrial Building
ADDRESS
29580 Hudson Dr. Novi, MI 48375
LOT/SUITE/SPACE #
SIDWELL #
50-22-04 -378 -004
May be obtained from the Assessing Department (248) 347-0485
CROSS ROADS OF PROPERTY
Hudson and Desoto Court
IS THE PROPERTY WITHIN A HOMEOWNER'S ASSOCIATION JURISDICTION?
[] YES [x] NO
REQUEST IS FOR:
[] RESIDENTIAL [x] COMMERCIAL [] VACANT PROPERTY [] SIGNAGE
DOES YOUR APPEAL RESULT FROM A NOTICE OF VIOLATION OR CITATION ISSUED?
[] YES [x] NO
II. APPLICANT INFORMATION
A. APPLICANT
EMAIL ADDRESS
matthewh@copperrockconstruction.com
CELL PHONE NO.
616-570-2382
NAME
Matthew Hall
TELEPHONE NO.
ORGANIZATION/COMPANY
CopperRock Construction
FAX NO.
ADDRESS
601 5th St. NW Suite 300
CITY
Grand Rapids
STATE
MI
ZIP CODE
49504
B. PROPERTY OWNER [] CHECK HERE IF APPLICANT IS ALSO THE PROPERTY OWNER
Identify the person or organization that owns the subject property:
EMAIL ADDRESS
sgabriel@gabrielgrp.com
CELL PHONE NO.
NAME
Scott Gabriel
TELEPHONE NO.
616-803-9720 ext 204
ORGANIZATION/COMPANY
Gabriel Group
FAX NO.
ADDRESS
601 5th St. Suite 400
CITY
Grand Rapids
STATE
MI
ZIP CODE
49504
III. ZONING INFORMATION
A. ZONING DISTRICT
[] R-A [] R-1 [] R-2 [] R-3 [] R-4 [] RM-1 [] RM-2 [] MH
[x] I-1 [] I-2 [] RC [] TC [] TC-1 [] OTHER
B. VARIANCE REQUESTED
INDICATE ORDINANCE SECTION (S) AND VARIANCE REQUESTED:
1. Section 5.4.3 Variance requested Truck dock locations located in side yard off of Desoto court (within setback)
2. Section Variance requested
3. Section Variance requested
4. Section Variance requested
IV. FEES AND DRAWINGS
A. FEES
[] Single Family Residential (Existing) \$200 [] (With Violation) \$250 [] Single Family Residential (New) \$250
[x] Multiple/Commercial/Industrial \$300 [] (With Violation) \$400 [] Signs \$300 [] (With Violation) \$400
[] House Moves \$300 [] Special Meetings (At discretion of Board) \$600
B. DRAWINGS 1-COPY & 1 DIGITAL COPY SUBMITTED AS A PDF
• Dimensioned Drawings and Plans
• Site/Plot Plan
• Existing or proposed buildings or addition on the property
• Number & location of all on-site parking, if applicable
• Existing & proposed distance to adjacent property lines
• Location of existing & proposed signs, if applicable
• Floor plans & elevations
• Any other information relevant to the Variance application



ZONING BOARD OF APPEALS APPLICATION

V. VARIANCE

A. VARIANCE (S) REQUESTED

DIMENSIONAL USE SIGN

There is a five (5) hold period before work/action can be taken on variance approvals.

B. SIGN CASES (ONLY)

Your signature on this application indicates that you agree to install a **Mock-Up Sign** ten (10) days before the scheduled ZBA meeting. Failure to install a mock-up sign may result in your case not being heard by the Board, postponed to the next schedule ZBA meeting, or cancelled. A mock-up sign is **NOT** to be an actual sign. Upon approval, the mock-up sign must be removed within five (5) days of the meeting. If the case is denied, the applicant is responsible for all costs involved in the removal of the mock-up or actual sign (if erected under violation) within five (5) days of the meeting.

C. ORDINANCE

City of Novi Ordinance, Section 7.10 – Miscellaneous

No order of the ZBA permitting the erection of a building shall be valid for a period longer than one (1) year, unless a building permit for such erection or alteration is obtained within such period and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.

No order of the ZBA permitting a use of a building or premises shall be valid for a period longer than one-hundred and eighty (180) days unless such use is established within such a period; provided, however, where such use permitted is dependent upon the erection or alteration of a building such order shall continue in force and effect if a building permit for such erection or alteration is obtained within one (1) year and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.

D. APPEAL THE DETERMINATION OF THE BUILDING OFFICIAL

PLEASE TAKE NOTICE:

The undersigned hereby appeals the determination of the Building Official / Inspector or Ordinance made

CONSTRUCT NEW HOME/BUILDING ADDITION TO EXISTING HOME/BUILDING SIGNAGE
 ACCESSORY BUILDING USE OTHER _____

VI. APPLICANT & PROPERTY SIGNATURES

A. APPLICANT

Applicant Signature

3/27/23

Date

B. PROPERTY OWNER

If the applicant is not the owner, the property owner must read and sign below:

The undersigned affirms and acknowledges that he, she or they are the owner(s) of the property described in this application, and is/are aware of the contents of this application and related enclosures.

Property Owner Signature

3-21-22

Date

VII. FOR OFFICIAL USE ONLY

DECISION ON APPEAL:

GRANTED

DENIED

The Building Inspector is hereby directed to issue a permit to the Applicant upon the following conditions:

Chairperson, Zoning Board of Appeals

Date



Community Development Department

45175 Ten Mile Road
Novi, MI 48375
(248) 347-0415 Phone
(248) 735-5600 Facsimile
www.cityofnovi.org

**REVIEW STANDARDS
DIMENSIONAL VARIANCE**

The Zoning Board of Appeals (ZBA) will review the application package and determine if the proposed Dimensional Variance meets the required standards for approval. In the space below, and on additional paper if necessary, explain how the proposed project meets each of the following standards. (Increased costs associated with complying with the Zoning Ordinance will not be considered a basis for granting a Dimensional Variance.)

Standard #1. Circumstances or Physical Conditions.

Explain the circumstances or physical conditions that apply to the property that do not apply generally to other properties in the same zoning district or in the general vicinity. Circumstances or physical conditions may include:

- a. Shape of Lot.** Exceptional narrowness, shallowness or shape of a specific property in existence on the effective date of the Zoning Ordinance or amendment.
 Not Applicable Applicable If applicable, describe below:

and/or

- b. Environmental Conditions.** Exceptional topographic or environmental conditions or other extraordinary situations on the land, building or structure.
 Not Applicable Applicable If applicable, describe below:

and/or

- c. Abutting Property.** The use or development of the property immediately adjacent to the subject property would prohibit the literal enforcement of the requirements of the Zoning Ordinance or would involve significant practical difficulties.
 Not Applicable Applicable If applicable, describe below:

The neighboring property and the way the current connection point for the parking lots prohibit accessing a truck dock from that location. We were required to connect the parking to that existing lot, and keep parking in the rear/side yards. Because this is a corner lot, we have extensive setbacks and we are able to keep the entire length of the dock (with a truck parked in it) within the north setback, but that is the only reasonable location to have truck access, while accomodating all other zoning ordinance requirements. Had there been a shared curbcut required for the property to the east would've been the only way to possibly alter the site plan to have a dock in an alternate location +

Standard #2. Not Self-Created.

Describe the immediate practical difficulty causing the need for the Dimensional Variance, that the need for the requested variance is not the result of actions of the property owner or previous property owners (i.e., is not self-created).

The configuration of the neighboring parking lot, and the required connection point, as well as the lack of a shared curb cut on the property line limit the ability to put a truck dock anywhere other than the proposed location. Because this is I-1 zoned property, it is reasonable to assume the users in the industrial drive will need truck dock availability. Additionally, because we have two front yard setbacks, we are limited with working area and no connection points on any neighboring properties. We were able to keep the dock location relatively hidden from incoming traffic on Hudson drive, and the building, truck dock, and trucks

Standard #3. Strict Compliance.

Explain how the Dimensional Variance in strict compliance with regulations governing area, setback, frontage, height, bulk, density or other dimensional requirements will unreasonably prevent the property owner from using the property for a permitted purpose, or will render conformity with those regulations unnecessarily burdensome.

Strict compliance would unreasonably limit the owner's ability to have a building of acceptable size for an I-1 use. A typical turnaround length is 125-130' needed for a truck in front of the dock, and if we were to have a dock in the rear, there would be no room for a building, and most of the useable property would be asphalt.

Standard #4. Minimum Variance Necessary.

Explain how the Dimensional Variance requested is the minimum variance necessary to do substantial justice to the applicant as well as to other property owners in the district.

The dimensional variance requested is the minimum variance necessary to do substantial justice because we are able to keep everything within the required setbacks, even when the truck dock is in use, and we were able to keep all parking out of both front yard setbacks, and comply with the connection to the east parking lot. The proposed location will also be the least conspicuous to entering traffic.

Standard #5. Adverse Impact on Surrounding Area.

Explain how the Dimensional Variance will not cause an adverse impact on surrounding property, property values, or the use and enjoyment of property in the neighborhood or zoning district.

The dimensional variance will not cause any adverse impact. Most other buildings in the industrial drive also have truck docks, we are keeping ample green space in the required front yard setbacks, our building entrance is faced appropriately for nice aesthetics and has significant glass and masonry aspects to keep in line with existing properties. Because we are keeping the truck dock well within the front yard setback, there will not be any additional traffic burden or trucks in the road or outside the setback.

Owner / Developer

COPPERROCK CONSTRUCTION
601 Fifth Street NW
Suite 300
Grand Rapids, MI 49504

CONTACT:
Matthew Hall, Pre-construction Manager
Tel. (616) 570-2382

Architect

MAXAM ARCHITECTURE
557 Crescent NE
Grand Blanc, MI 49504
Tel. (616) 308-9729

Civil Engineer

NOWAK & FRAUS ENGINEERS
46777 Woodward Ave.
Pontiac, MI 48342-5032

CONTACT:
Brett J. Buchholz, P.E., Principal
Paul Tulikangas, P.E., Associate

Tel. (248) 332-7931
Fax. (248) 332-8257

Landscape Architect

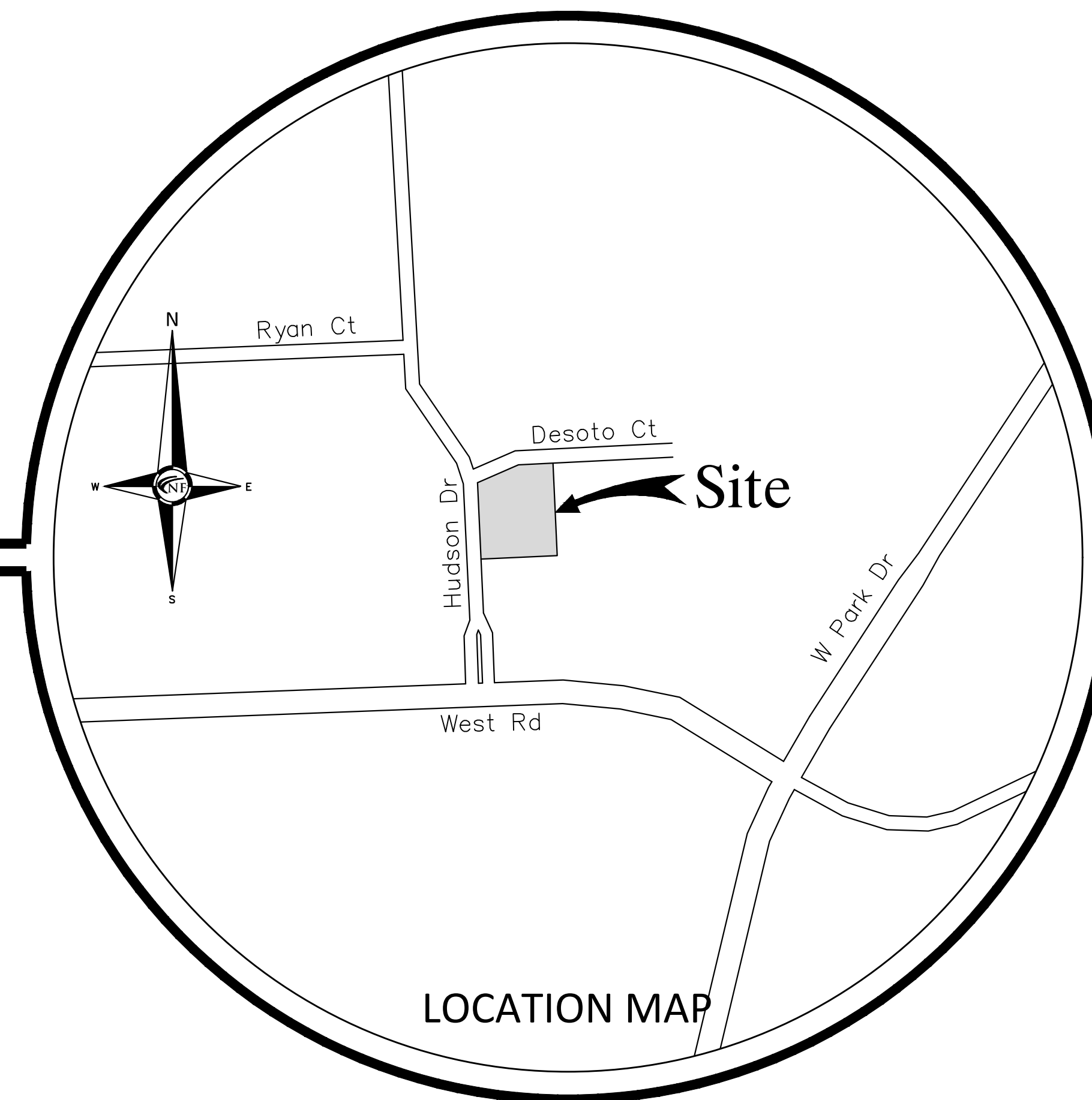
NOWAK & FRAUS ENGINEERS
46777 Woodward Ave.
Pontiac, MI 48342-5032

CONTACT:
George A. Ostrowski, PLA, LEED AP

Tel. (248) 332-7931
Fax. (248) 332-8257

City of Novi,
Oakland County, Michigan
SITE PLAN DOCUMENTS
Prepared For
CopperRock Construction

PART OF THE SW 1/4 OF SECTION 4, T.1N., R. 8E.,
CITY OF NOVI,
OAKLAND COUNTY, MICHIGAN



SHEET INDEX

- C0 - Cover Sheet
- C1 - Existing Easement Plan
- C2 - Demolition Plan
- C3 - Overall Site Plan
- C4 - Truck Maneuver Plan
- C5 - Paving-Grading Plan
- C6 - Utility Plan
- C7 - Storm Water Management Plan (1 of 3)
- C8 - Storm Water Management Plan (2 of 3)
- C9 - Storm Water Management Plan (3 of 3)
- C10 - Soil Erosion and Sedimentation Control Plan
- C11 - MDOT Sidewalk Ramp Details (R-28-J)

- L1 - Tree Preservation Plan
- L2 - Landscape Plan
- L3 - Landscape Notes and Details

Photometric Plan

LEGAL DESCRIPTION

PARCEL NUMBER 22-04-378-004, 29580
HUDSON DRIVE
T.1N., R.8E., SEC. 4, UNIT 5 OF BECK
NORTH CORPORATE PARK - NOVI
CONDOMINIUM, OAKLAND COUNTY
CONDOMINIUM SUBDIVISION PLAN NO.
1264, LIBER 21427, PAGE 238, OAKLAND
COUNTY RECORDS.

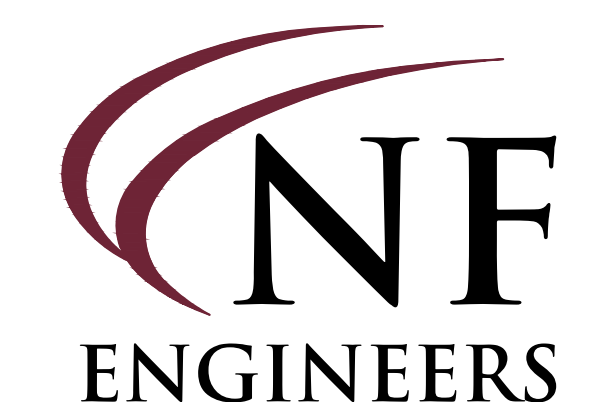
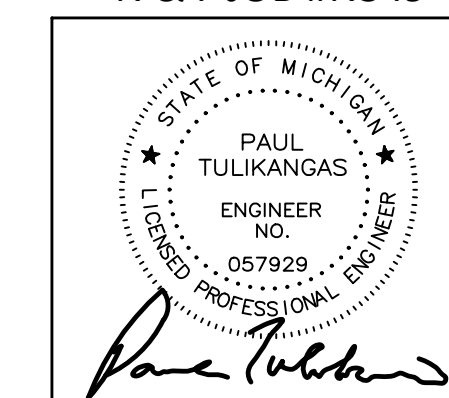
REVISIONS:
01-19-22 ISSUED FOR OWNER REVIEW
02-01-22 ISSUED FOR PRELIM. SITE PLAN REVIEW
03-22-2023 REVISED PER CITY REVIEW

Project Name

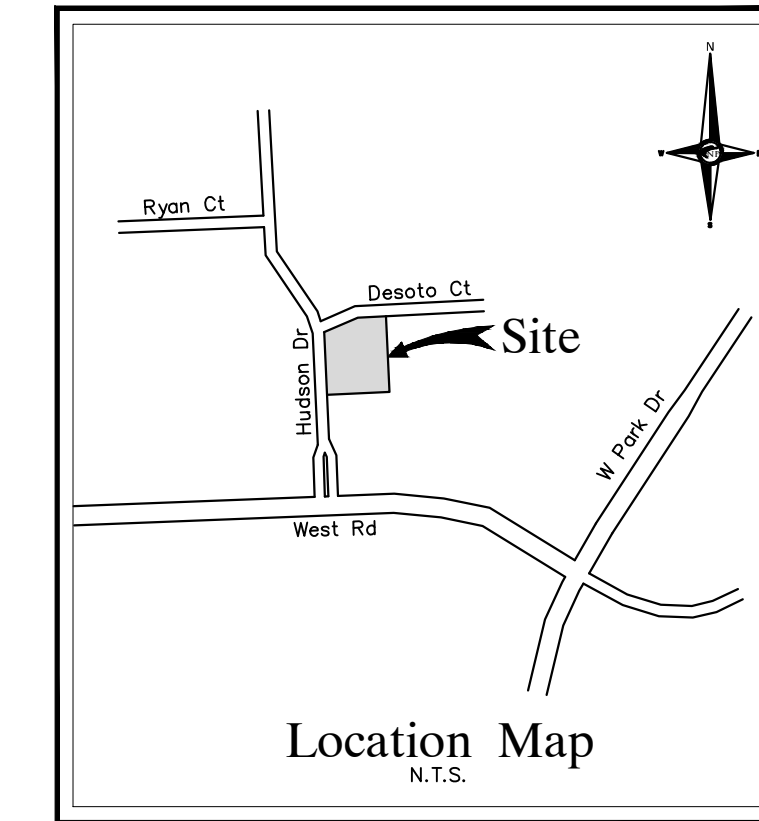
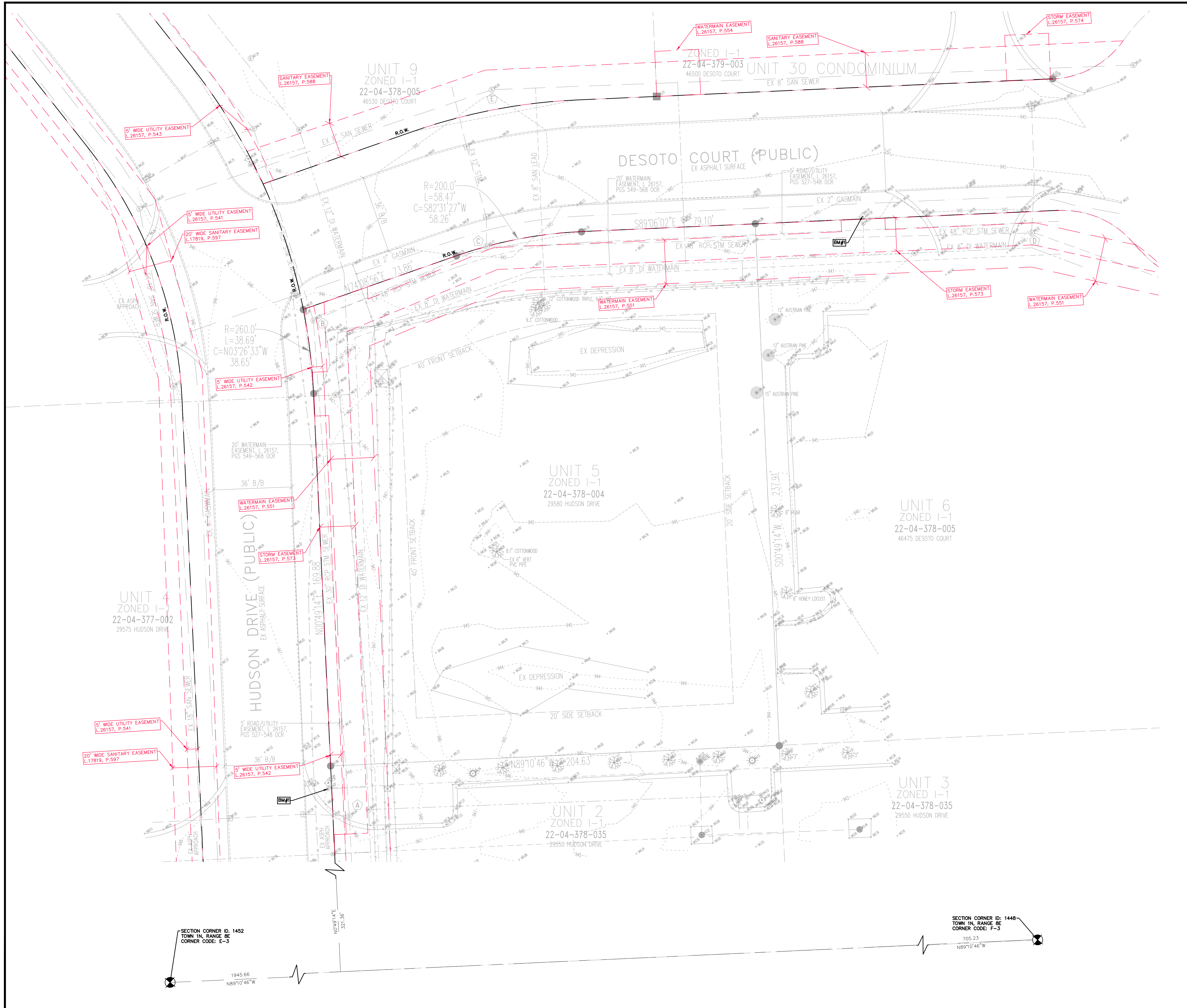
**Beck North Unit 5 Industrial
Office Building - 29580
Hudson Drive (JSP 22-54)**



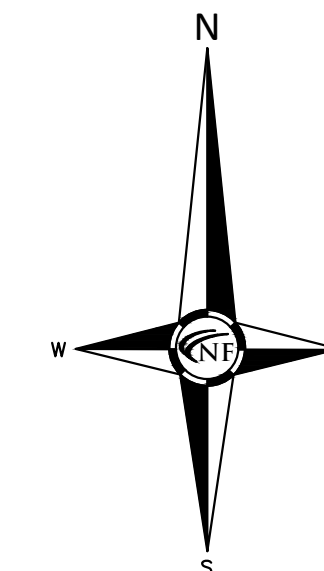
N & F JOB #N349



CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS
NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NFE-ENGR.COM



Location Map
N.T.S.



SEAL

PROJECT
Beck North Unit 5 Industrial
Office Building - 29580
Hudson Drive (JSP 22-54)

CLIENT
CopperRock Construction
601 Fifth Street NW
Suite 300
Grand Rapids, MI 49504
Tel. (616) 570-2382

Contact: Matthew Hall,
Pre-construction Manager

PROJECT LOCATION
Part of the SW ¼
of Section 4
T.1N., R.8E.,
City of Novi,
Oakland County, Michigan

SHEET
Existing Easement Plan



DATE ISSUED/REVISED
01-19-22 ISSUED FOR OWNER REVIEW
02-01-22 ISSUED FOR PRELIM. SITE PLAN REVIEW
03-22-2023 REVISED PER CITY REVIEW

BENCH MARK #1:
PER SURVEY BY OTHERS: ARROW ON TOPOF EXISTING FIRE HYDRANT, LOCATED AT THE SOUTHWEST CORNER OF THE SITE, NORTH SIDE OF DRIVEWAY APPROACH TO 29550, AS SHOWN. ELEVATION: 950.44(NAVD 88)
PER CITY ESTABLISHED B.M. - BENCHMARK #431: X ON EAST NORTHEAST FLANGE BOLT OF FIRE HYDRANT LOCATED 20 FEET EAST OF CENTERLINE OF HUDSON DRIVE AND ACROSS FROM PROPERTIES #29545-#29575 HUDSON ROAD. ELEVATION: 949.859
BENCH MARK #2:
PER SURVEY BY OTHERS: ARROW ON TOP OF EXISTING FIRE HYDRANT, LOCATED AT THE NORTHEAST CORNER OF THE SITE, WEST SIDE OF DRIVEWAY APPROACH TO 46475 DESOTO, AS SHOWN. ELEVATION: 950.44(NAVD 88)

SURVEY NOTE:
THIS SURVEY HAS BEEN PROVIDED BY THE PROJECT OWNER FOR THE PURPOSES OF DESIGN BY NOWAK & FRAUS, PLLC. NOWAK & FRAUS, PLLC HAS NOT FIELD VERIFIED THE INFORMATION CONTAINED ON THIS SHEET. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT OWNER FOR CLARIFICATION BY THE ORIGINAL SURVEYOR.
NO GUARANTEE IS MADE BY NOWAK & FRAUS, PLLC FOR THE ACCURACY OF THE DATA CONTAINED ON THIS SURVEY.

TOPOGRAPHIC SURVEY NOTES
ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.
UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.
THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER

LEGEND

	MANHOLE		EXISTING SANITARY SEWER
	HYDRANT		EXISTING SAN. CLEAN OUT
	MANHOLE GATE VALVE		EXISTING WATER MAIN
	MANHOLE CATCH BASIN		EXISTING STORM SEWER
	UTILITY POLE GUY POLE		EX. R.Y. CATCH BASIN
	GUY WIRE		EXISTING BURIED CABLES
	LIGHT POLE		OVERHEAD LINES
	SIGN		EXISTING GAS MAIN

DRAWN BY:
J. Lawrey

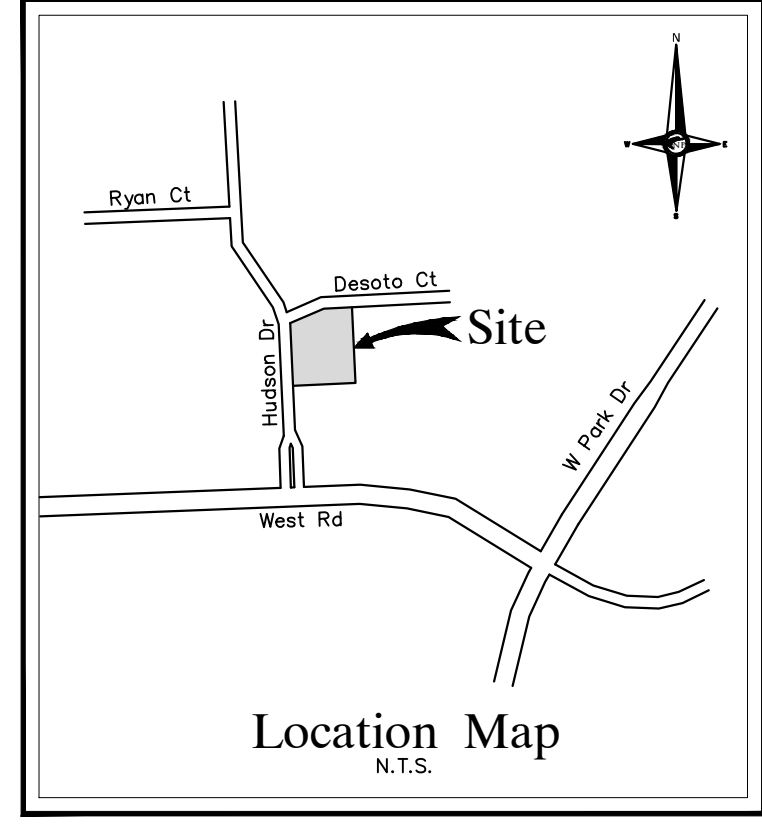
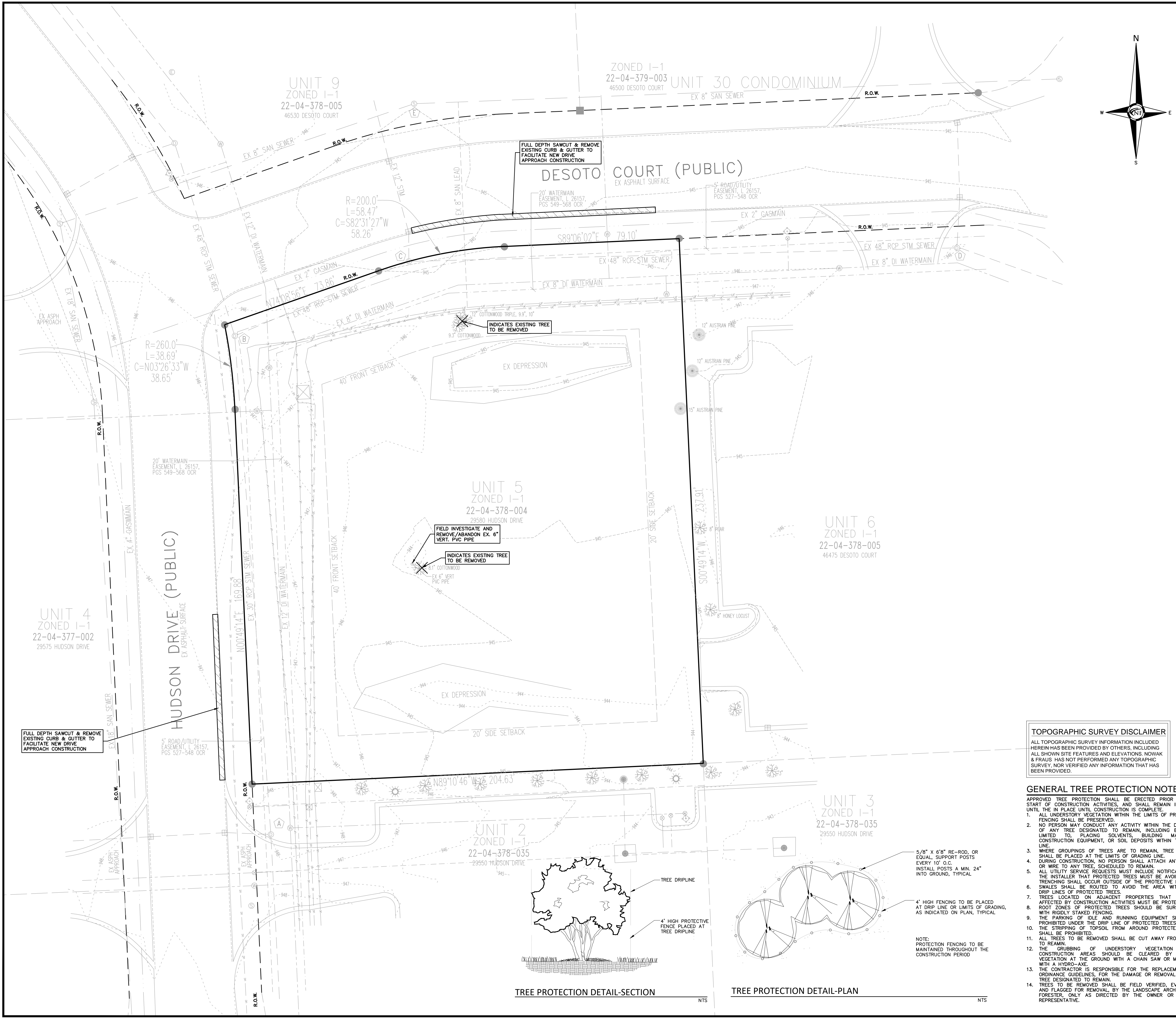
DESIGNED BY:
G. Viju

APPROVED BY:
B. Buchholz

DATE:
January 19, 2022

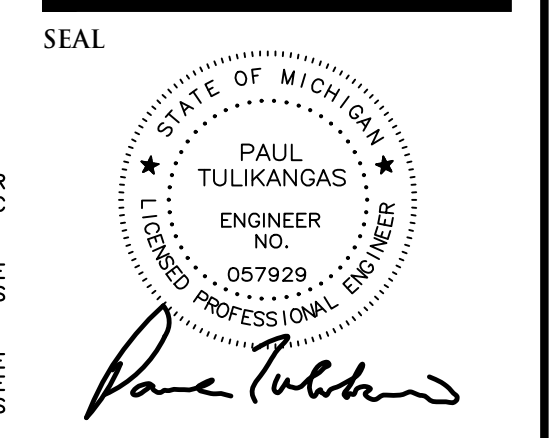
SCALE: 1" = 20'

NFE JOB NO. SHEET NO.
N349 C1



NF ENGINEERS
 CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS
 46777 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257
 WWW.NOWAKFRAUS.COM



PROJECT
 Beck North Unit 5 Industrial
 Office Building - 29580
 Hudson Drive (JSP 22-54)

CLIENT
 CopperRock Construction
 601 Fifth Street NW
 Suite 300
 Grand Rapids, MI 49504
 Tel. (616) 570-2382

Contact: Matthew Hall,
 Pre-construction Manager

PROJECT LOCATION
 Part of the SW 1/4
 of Section 4
 T.1N., R.8E.,
 City of Novi,
 Oakland County, Michigan

SHEET
 Demolition Plan



DATE ISSUED/REVISED
 01-19-22 ISSUED FOR OWNER REVIEW
 02-01-22 ISSUED FOR PRELIM. SITE PLAN REVIEW
 03-22-2023 REVISED PER CITY REVIEW

DRAWN BY:
 J. Lawrey

DESIGNED BY:
 G. Viju

APPROVED BY:
 B. Buchholz

DATE:
 January 19, 2022

SCALE: 1" = 20'

NFE JOB NO. SHEET NO.
 N349 C2

DEMOLITION NOTES

DEMOLITION OF SITE IMPROVEMENTS SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE PUBLIC AGENCY HAVING JURISDICTION OVER SAID DEMOLITION.

FOR ANY DEMOLITION WITHIN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR, AND SECURE, ALL NECESSARY PERMITS AND LIKewise SHALL ARRANGE FOR ALL SITE INSPECTIONS.

THE CONTRACTOR SHALL COORDINATE TRUCK ROUTES WITH THE MUNICIPALITY PRIOR TO COMMENCEMENT OF SITE DEMOLITION. ALL TRUCKS SHALL BE TARPED OR PROPERLY SECURED TO CONTAIN DEMOLITION DEBRIS PRIOR TO LEAVING SITE.

EXISTING ON-SITE UNDERGROUND UTILITIES AND BUILDING SERVICES HAVE BEEN INDICATED BASED UPON THE BEST AVAILABLE UTILITY RECORDS AND/OR ON-SITE INSPECTION. NO GUARANTEE IS MADE BY THE DESIGN ENGINEER, AS TO THE COMPLETENESS OR ACCURACY OF UTILITY DATA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF UTILITY INFORMATION (THE DESIGN ENGINEER MAKES NO GUARANTEE NOR ASSUMES ANY LIABILITY AS TO THE COMPLETENESS AND/OR ACCURACY OF UTILITY DATA).

PRIOR TO THE REMOVAL OR ABANDONMENT OF ANY EXISTING UNDERGROUND UTILITY OR BUILDING SERVICE LINES CALLED FOR IN THE PLANS OR DISCOVERED DURING EXCAVATION, THE CONTRACTOR MUST DETERMINE IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE. IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE/ACTIVE, THE CONTRACTOR MUST TAKE ALL THE NECESSARY STEPS TO GUARANTEE THAT THE UTILITY LINE OR BUILDING SERVICE IS RECONNECTED WITHOUT AN INTERRUPTION IN SERVICE. THE RECONNECTION OF THE UTILITY LINE OR BUILDING SERVICE MUST BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE APPROPRIATE GOVERNMENTAL AGENCY OR PRIVATE UTILITY COMPANY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO SITE DEMOLITION.

* THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF THE SITE DEMOLITION.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANIES ELECTRICAL SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANIES COMMUNICATION SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANIES GAS SERVICES SHALL BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF PRIVATE UTILITY COMPANIES AND COORDINATE UTILITY SERVICE SHUT OFF/DISCONNECT, PRIOR TO DEMOLITION OF EXISTING STRUCTURES OR PROPERTIES.

ALL UTILITY METERS SHALL BE REMOVED BY THE APPROPRIATE UTILITY COMPANY.

ANY ON-SITE STORM SEWER FACILITIES LOCATED DURING DEMOLITION SHALL BE REMOVED AND BULK HEADED AT THE PROPERTY LINE IF INDICATED FOR REMOVAL ON THE PLANS.

PRIOR TO BUILDING DEMOLITION, ALL HAZARDOUS MATERIAL SHALL BE REMOVED BY OTHERS. THE DEMOLITION CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUSPICIOUS MATERIAL BE FOUND.

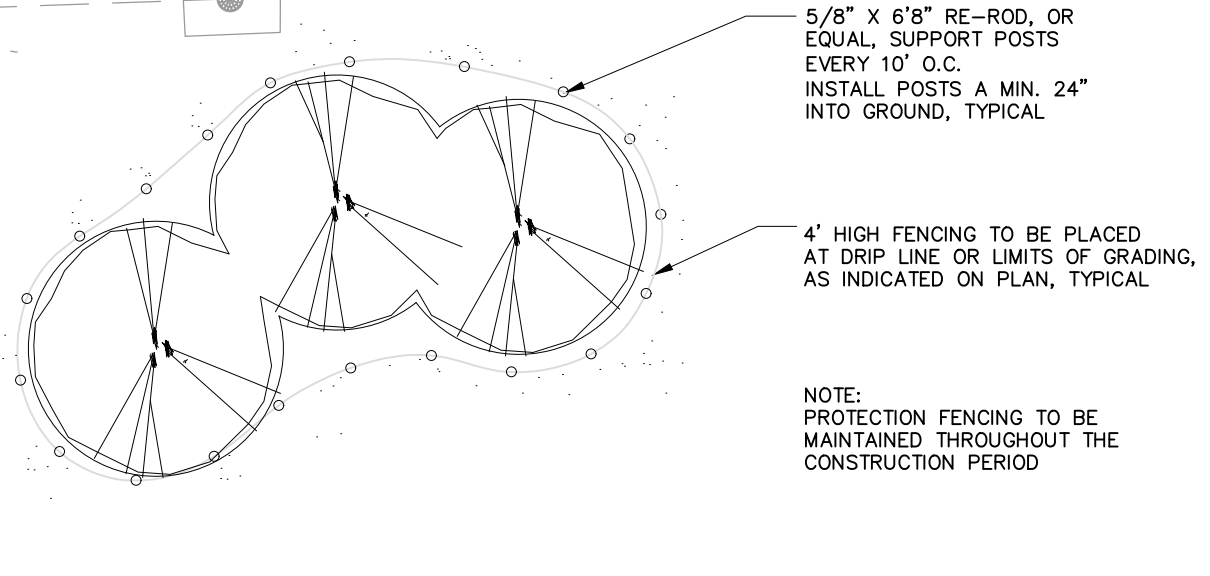
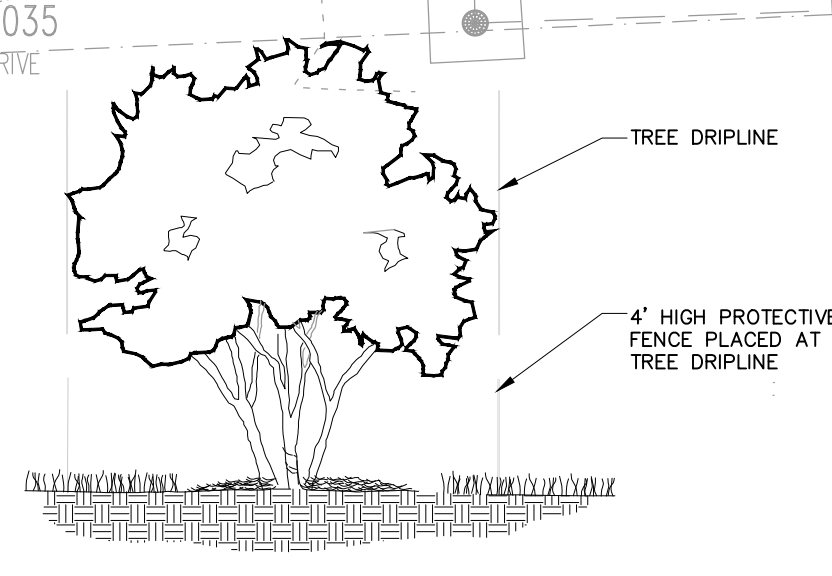
WATER SERVICES AND/OR STOP-BOX SHALL BE PRESERVED AND BULK HEADED AT THE PROPERTY LINE OR AS DIRECTED BY THE OWNER'S REPRESENTATION.

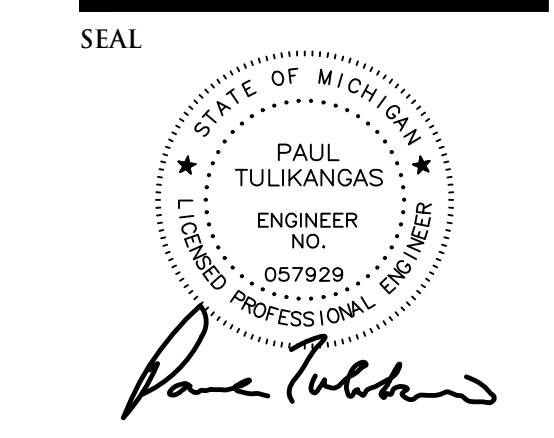
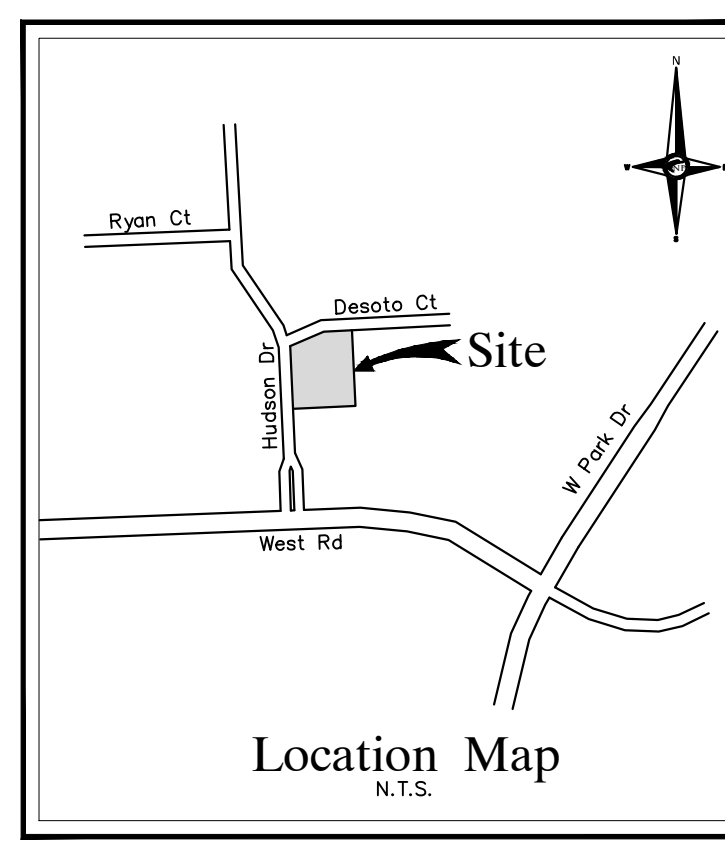
WHERE EXISTING BUILDINGS PLANNED FOR DEMOLITION FALL WITHIN PROPOSED BUILDING FOOTPRINTS, BASEMENT FLOOR SLABS, FOUNDATION WALLS AND FOOTINGS SHALL BE COMPLETELY REMOVED AND BACK FILLED WITH MDOT CLASS II GRANULAR MATERIAL AND BE MACHINE COMPACTED TO A MINIMUM OF 98% MATERIALS MAXIMUM DENSITY.

TOPOGRAPHIC SURVEY DISCLAIMER

ALL TOPOGRAPHIC SURVEY INFORMATION INCLUDED HEREIN HAS BEEN PROVIDED BY OTHERS, INCLUDING ALL SHOWN SITE FEATURES AND ELEVATIONS. NOWAK & FRAUS HAS NOT PERFORMED ANY TOPOGRAPHIC SURVEY NOR VERIFIED ANY INFORMATION THAT HAS BEEN PROVIDED.

- GENERAL TREE PROTECTION NOTES**
- APPROVED TREE PROTECTION SHALL BE ERECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL THE IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
 - ALL UNDERSTORY VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PRESERVED.
 - NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN THE DRIP LINE.
 - WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE FENCING SHALL BE PLACED AT THE LIMITS OF GRADING LINE.
 - DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY TREE, SCHEDULED TO REMAIN.
 - ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TREMORING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
 - SWALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
 - TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
 - ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED WITH RIGIDLY STAKED FENCING.
 - THE PARKING OF IDLE AND RUNNING EQUIPMENT SHALL BE PROHIBITED UNDER THE DRIP LINE OF PROTECTED TREES.
 - THE STRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED.
 - ALL TREES TO BE REMOVED SHALL BE CUT AWAY FROM TREES TO REMAIN.
 - THE GRUBBING OF UNDERSTORY VEGETATION WITHIN CONSTRUCTION AREAS SHOULD BE CLEARED BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR MINIMALLY WITH A HYDRO-AXE.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT PER ORDINANCE GUIDELINES, FOR THE DAMAGE OR REMOVAL OF ANY TREE DESIGNATED TO REMAIN.
 - TREES TO BE REMOVED SHALL BE FIELD VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DIRECTED BY THE OWNER OR OWNERS REPRESENTATIVE.





PROJECT
 Beck North Unit 5 Industrial Office Building - 29580 Hudson Drive (JSP 22-54)

CLIENT
 CopperRock Construction
 601 Fifth Street NW
 Suite 300
 Grand Rapids, MI 49504
 Tel. (616) 570-2382

Contact: Matthew Hall,
 Pre-construction Manager

PROJECT LOCATION
 Part of the SW 1/4 of Section 4, T.1N., R.8E., City of Novi, Oakland County, Michigan

SHEET
 Overall Site Plan



DATE	ISSUED/REVISED
01-19-22	ISSUED FOR OWNER REVIEW
02-01-22	ISSUED FOR PRELIM. SITE PLAN REVIEW
03-22-2023	REVISED PER CITY REVIEW

DRAWN BY:
 J. Lawrey

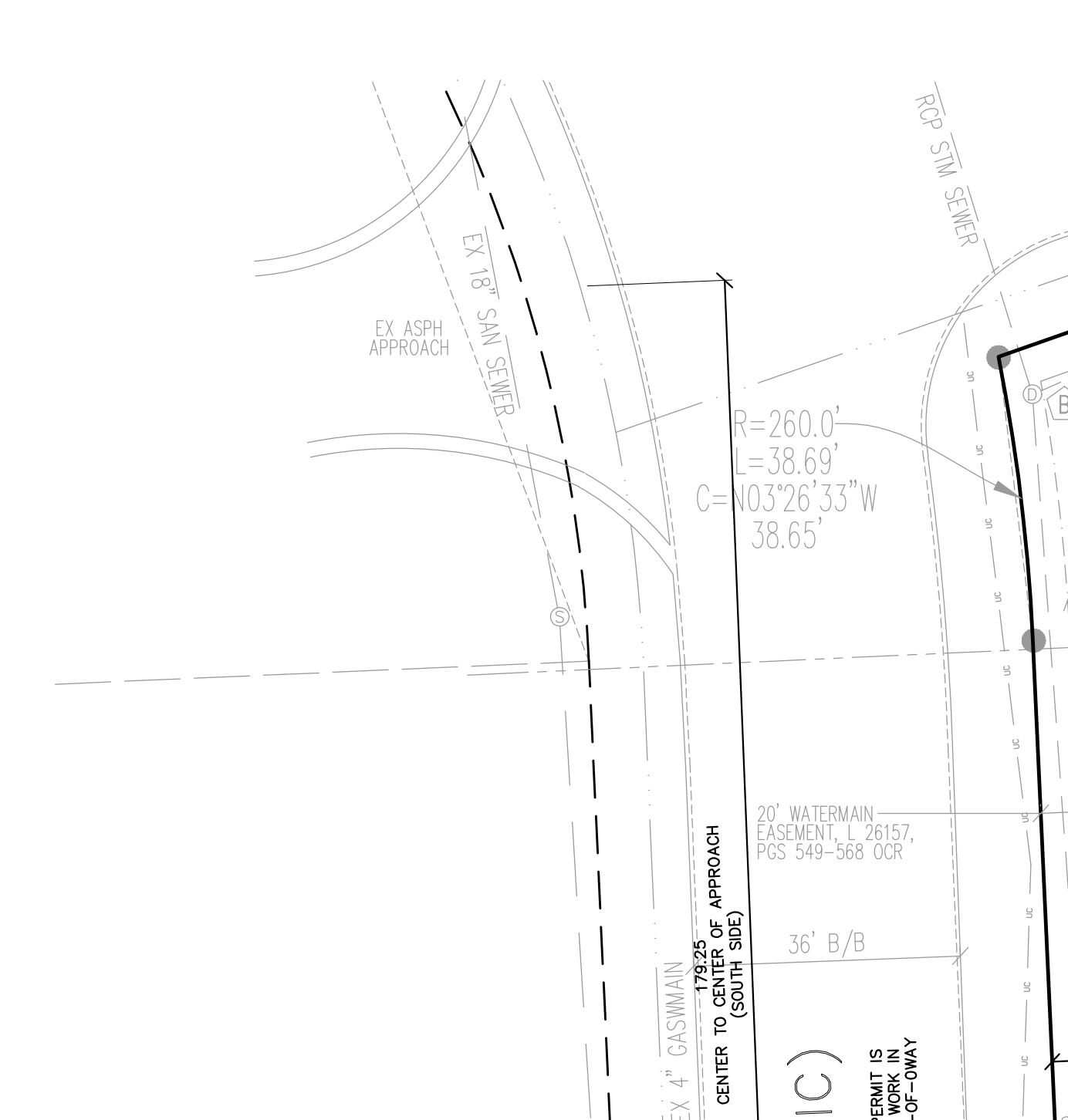
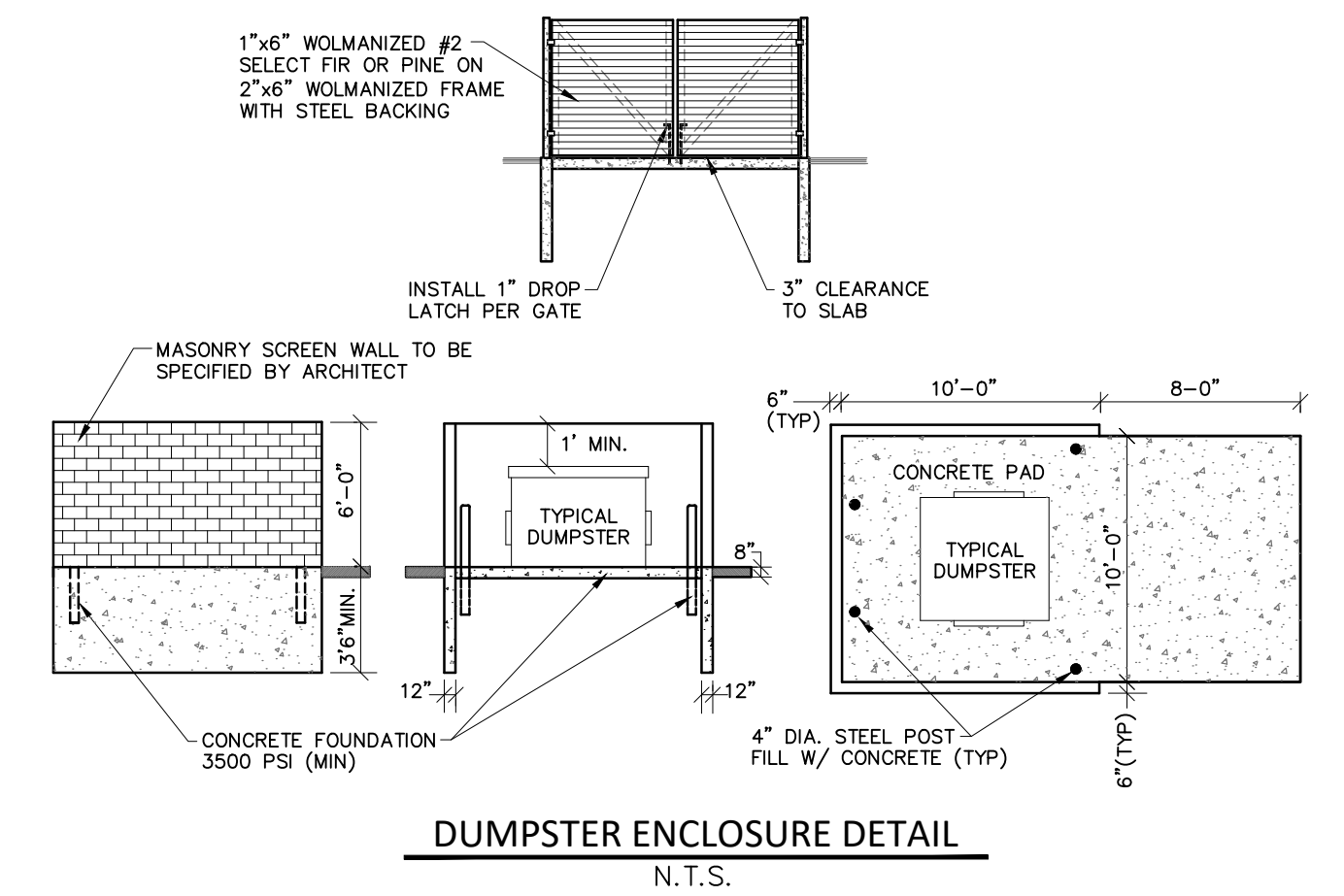
DESIGNED BY:
 G. Viju

APPROVED BY:
 B. Buchholz

DATE:
 January 19, 2022

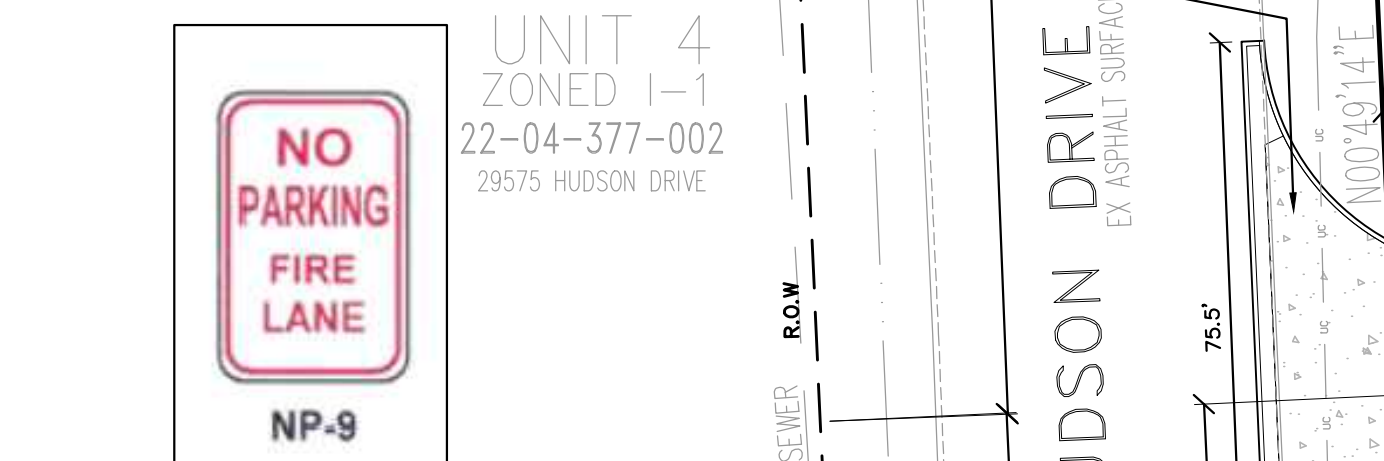
SCALE: 1" = 20'

NFE JOB NO. N349 **SHEET NO.** C3



SIGN INFORMATION & QUANTITY TABLE

DESIGNATION	MUTCD DESCRIPTION	SIZE	QUANTITY
SIGN "A"	NO PARKING - FIRE LANE	12"x18"	3
ADA SIGN	R7-8	12"x18"	2
ADA SIGN	R7-8 (VAN ACCESSIBLE SPACE)	12"x18"	1



12"x18" NO PARKING-FIRE LANE SIGN
 N.T.S.

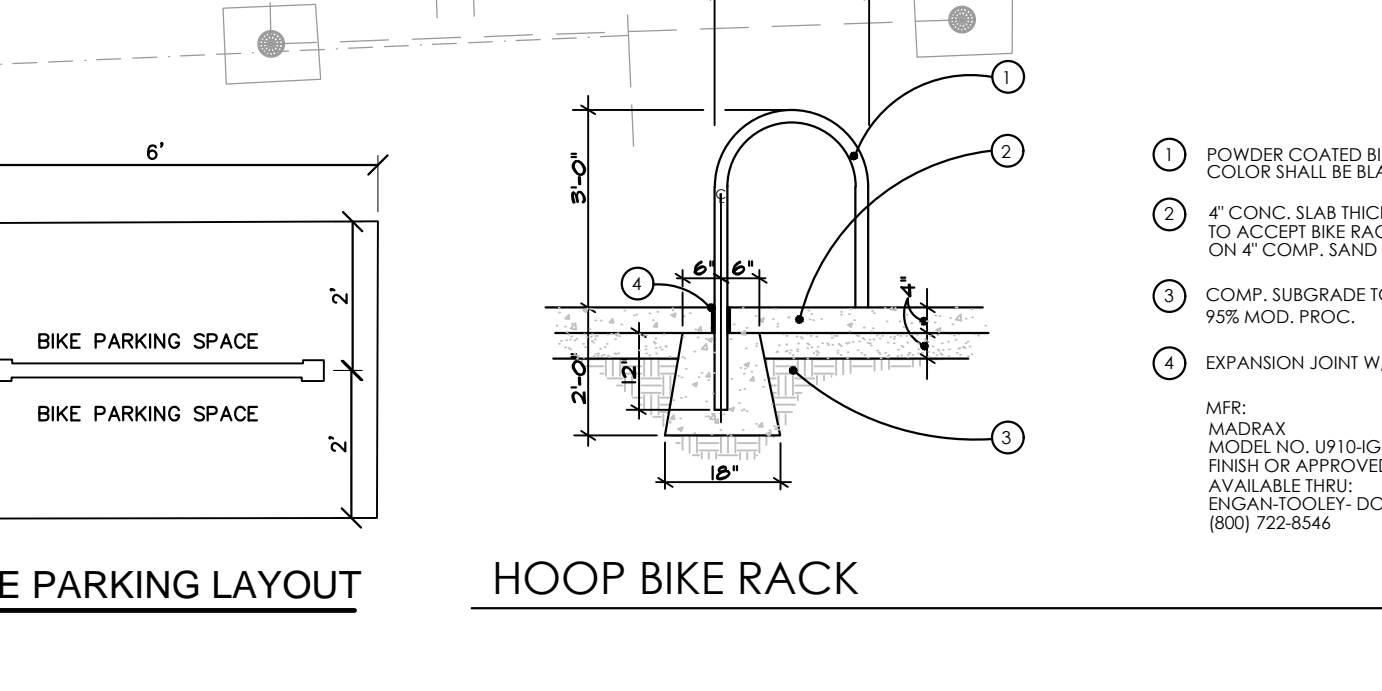
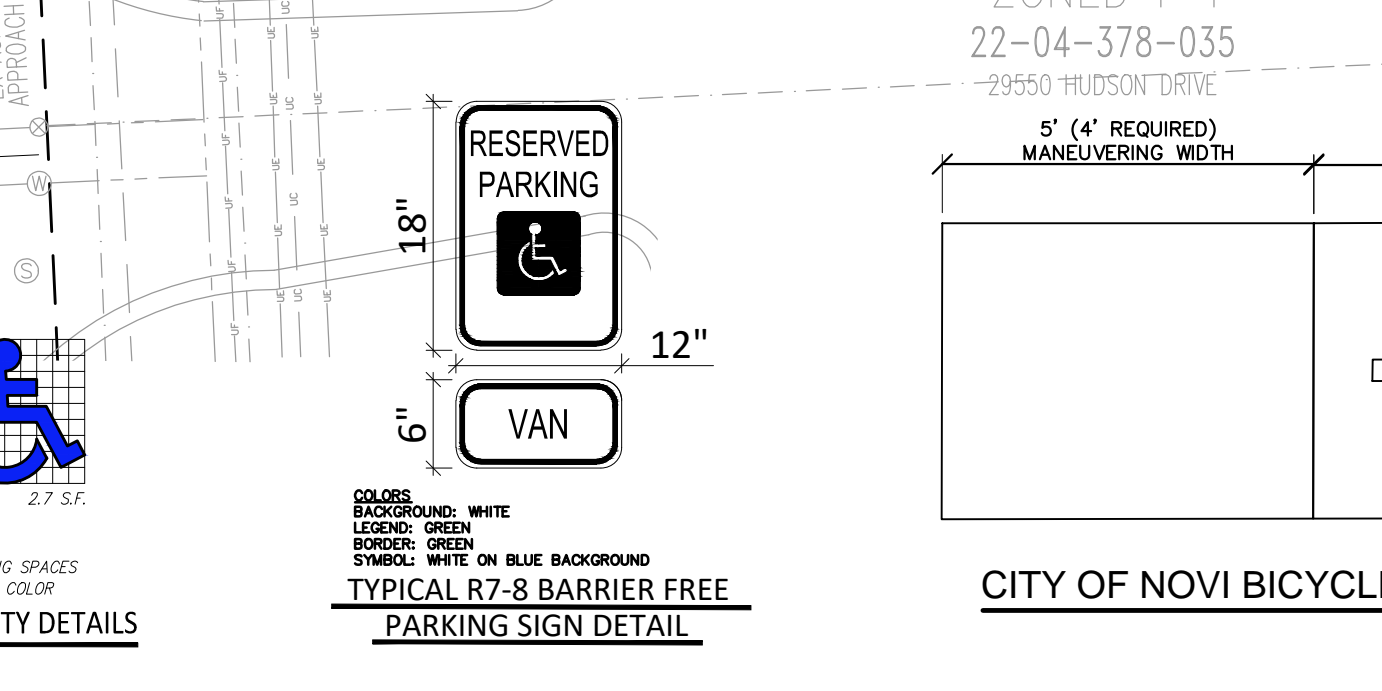
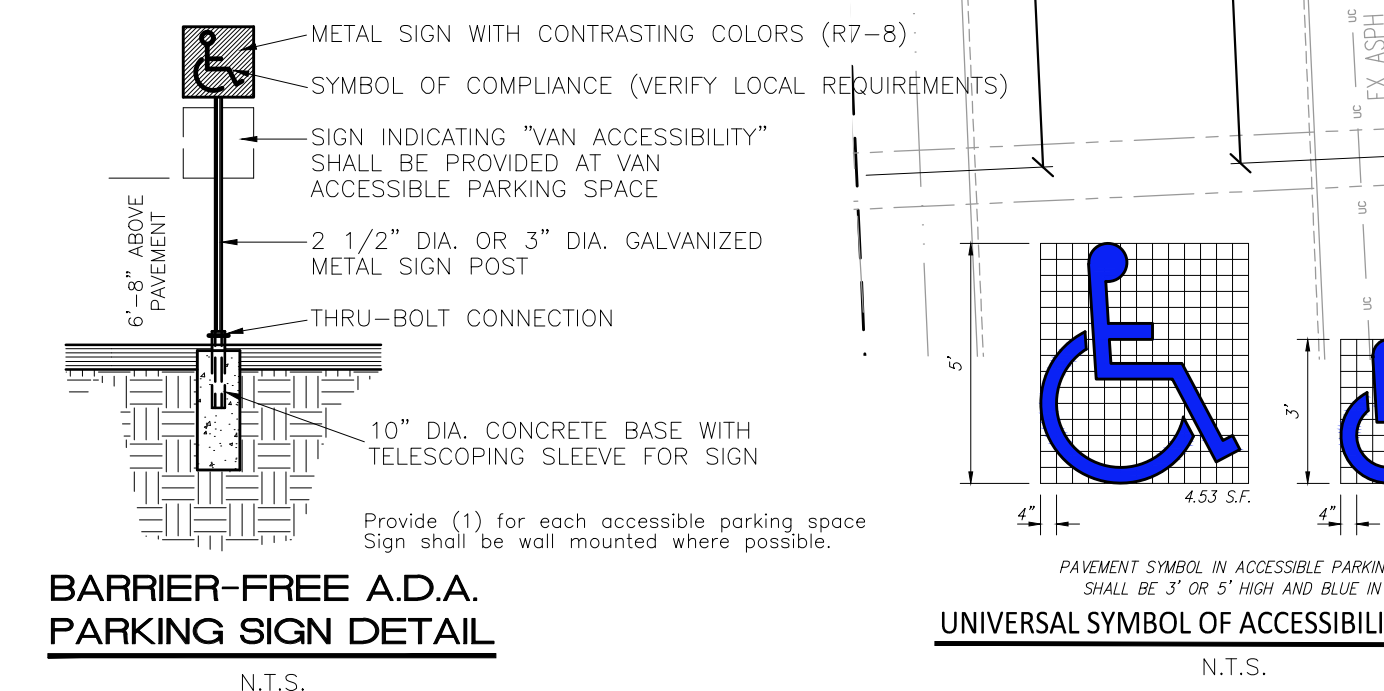
FIRE DEPARTMENT NOTES

ALL FIRE HYDRANTS MUST BE INSTALLED AND OPERATIONAL PRIOR TO ANY COMBUSTIBLE MATERIAL BEING BROUGHT ON SITE.

ALL BUILDINGS MUST COMPLY WITH THE INTERNATIONAL FIRE CODE SECTION 910 FOR EMERGENCY RADIO COVERAGE. TO BE IMPLEMENTED BY THE TIME OF THE FINAL INSPECTION OF THE FIRE ALARM AND FIRE SUPPRESSION.

FIRE APPARATUS ACCESS DRIVES TO AND FROM BUILDINGS THROUGH PARKING LOTS SHALL HAVE A MINIMUM 50 FEET OUTSIDE TURNING RADIUS AND DESIGNED TO SUPPORT A MINIMUM OF 35 TONS.

FIRE APPARATUS ACCESS ROAD SHALL BE PROVIDED FOR EVERY FACILITY, BUILDING CONSTRUCTED WITHIN THE JURISDICTION.



TOPOGRAPHIC SURVEY DISCLAIMER

ALL TOPOGRAPHIC SURVEY INFORMATION INCLUDED HEREIN HAS BEEN PROVIDED BY OTHERS, INCLUDING ALL SHOWN SITE FEATURES AND ELEVATIONS. NOWAK & FRAUS HAS NOT PERFORMED ANY TOPOGRAPHIC SURVEY, NOR VERIFIED ANY INFORMATION THAT HAS BEEN PROVIDED.

UTILITY NOTE

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GENERAL NOTES

- THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE CITY OF NOVI STANDARD DETAILS, SPECIFICATIONS, AND ORDINANCE. THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION (ENGLISH), OAKLAND COUNTY, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, AND THE 2012 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
- THE LOCATION OF ALL UTILITIES SHOWN ON THESE PLANS IS TAKEN FROM THE BEST AVAILABLE DATA. NO GUARANTEE IS IMPLIED OR EXPRESSED AS TO THE COMPLETENESS OR ACCURACY THEREOF. AS A CONDITION OF THIS CONTRACT, NOTICE SHALL BE GIVEN TO MISS DIG FOR ANY UNDERGROUND WORK TO BE PERFORMED IN ACCORDANCE WITH THIS CONTRACT. THE CONTRACTOR SHALL NOTIFY MISS DIG AT 1-800-487-7174 A MINIMUM OF THREE WORKING DAYS PRIOR TO ANY EXCAVATION OR GRADING. THE CONTRACTOR SHALL VERIFY THE LOCATION & DEPTHS OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ANTICIPATE TO LOCATE UTILITY CROSSINGS BY FIELD INVESTIGATION WHILE INSTALLING NEW UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO SAID EXISTING UTILITIES CAUSED BY HIS AND/OR HIS SUBCONTRACTOR'S OPERATIONS.
- PUBLIC RIGHT OF WAYS SHALL NOT BE CLOSED WITHOUT THE WRITTEN APPROVAL OF THE CITY. APPLICABLE PERMITS MUST BE OBTAINED FROM THE CITY OF NOVI AND OAKLAND COUNTY PRIOR TO THE COMMENCEMENT OF WORK. PROPER TEMPORARY SIGNING AND BARRICADING MUST BE ERRECTED AND MAINTAINED TO INSURE SAFE TRAFFIC CONDITIONS ADJACENT TO WORK WITHIN PUBLIC RIGHTS OF WAY.
- DUST CONTROL SHALL BE PROVIDED BY THE CONTRACTOR AT SUCH TIMES AS THE CITY COUNTY INSPECTORS SHALL DIRECT. WATER AND/OR CHLORINE USED AS A DUST CONTROL PALLIATIVE WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE WORK OF THE ENTIRE PROJECT.
- THE CONTRACTOR SHALL VERIFY WITH THE APPROPRIATE OWNER/SUBOWNER'S REPRESENTATIVE, ALL SALVAGED OR REMOVED MATERIAL, DEBRIS OR ITEMS ORIGINATING FROM THE PROJECT, NOT TO BE REUSED AS PART OF THIS PROJECT AND NOT TO BE CLAIMED BY THE APPROPRIATE OWNER(S). SAID ITEMS SHALL INCLUDE BUT NOT BE LIMITED TO: DRAINAGE STRUCTURE COVERS, SIGN SIGNAL POLES, DIRT, ETC. SHALL BECOME THE PROPERTY OF THE CONTRACTOR. SHALL BE IMMEDIATELY HULDED OFFSITE AND LEGALLY DISPOSED OF AND SHALL NOT BE STORED WITHIN MUNICIPAL RIGHTS OF WAY.
- IN CONJUNCTION WITH THE PROPOSED SITE WORK THE UTILITY COMPANIES AND/OR PUBLIC AGENCIES MAY BE RELOCATING OR REPLACING FACILITIES WHICH MAY OR MAY NOT BE SHOWN ON THESE PLANS. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE HIS OPERATION WITH THESE AND/OR OTHER UTILITIES. IF NECESSARY, TO NOT INCUR FURTHER COSTS TO THE OWNER.
- THE CONTRACTOR AND/OR SUBCONTRACTOR IS REQUIRED TO COOPERATE AND COORDINATE THEIR WORK WITH ALL WORK, IF ANY, BEING PERFORMED BY OTHERS.
- SAVING/CUTTING IS REQUIRED FOR THE REMOVAL OF PAVEMENT, SIDEWALK, CURB AND GUTTER, DRIVE APPROACHES, ETC. THE FIELD ENGINEER SHALL DETERMINE AND MARK IN THE FIELD THE APPROPRIATE REMOVAL OR SAVICUT LIMITS PRIOR TO CONSTRUCTION.
- IN THE SPIRIT OF PROVIDING QUALITY PROJECT ASSURANCE, ALL RECOMMENDATIONS AND SUGGESTIONS POSSED BY OTHER PROFESSIONAL DESIGN AND TESTING FIRMS INVOLVED WITH THIS PROJECT ARE BEING PROVIDED FOR ALL PLANS. SHALL BE CONSIDERED AND DECIDED UPON BY THE OWNER AND CONTRACTOR.
- ADJUSTING EXISTING STORM DRAIN, SANITARY SEWER AND GATE VALVE STRUCTURE COVERS AS INDICATED IN THE PLANS SHALL INCLUDE REMOVING AND REPLACING THE CASTINGCOVER, BLOCK, BRICK AND IF NEEDED, PRECAST SECTIONS TO OBTAIN THE DESIRED PROPOSED FIN ELEVATIONS. SET ALL FIN ELEVATIONS TO THE PROPOSED FINISHED GRADES AS INDICATED IN THE PLANS.
- PER CITY ORDINANCE, OUTDOOR STORAGE OF GOODS/MATERIALS IS PROHIBITED.
- ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOVI STANDARDS AND SPECIFICATIONS.

PAVEMENT MARKING AND SIGN NOTES:

- ALL PROPOSED SIGNS, PAVEMENT STRIPING, AND OTHER PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CITY OF NOVI AND MICHIGAN MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REQUIREMENTS.
- PAVEMENT MARKINGS SHALL BE 4" WIDE AND MEET THE FOLLOWING REQUIREMENTS:
 - NON-BARRIER-FREE PARKING SPACES SHALL BE WHITE IN COLOR.
 - BARRIER-FREE PARKING SPACES AND CROSS-HATCHING SHALL BE BLUE IN COLOR.
 - WHEEL-CHAIR SYMBOLS SHALL BE WHITE IN COLOR.
 - WHEN BARRIER-FREE AND NON-BARRIER-FREE SPACES ARE ADJACENT TO ONE ANOTHER, THEY SHALL BE SEPARATED BY A BUTTING BLUE AND WHITE STRIPES.
- BARRIER-FREE SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL ON THIS SHEET FOR PROPOSED ACCESSIBLE SPACES.
- ALL TRAFFIC CONTROL SIGNS SHALL USE THE FHWA STANDARD ALPHABET SERIES.
- ALL TRAFFIC CONTROL SIGNS SHALL HAVE HIGH INTENSITY PRISMATIC (HIP) SHEETING TO MEET FHWA RETRO REFLECTIVITY REQUIREMENTS.
- GALVANIZED 2 LB. U-CHANNEL POSTS SHALL BE PROVIDED FOR ALL SIGNS 12"x18" OR SMALLER. GALVANIZED 3 LB. U-CHANNEL POSTS SHALL BE PROVIDED FOR ALL SIGNS LARGER THAN 12"x18".
- A MINIMUM OF 7' CLEARANCE SHALL BE PROVIDED TO THE BOTTOM OF THE LOWEST SIGN MOUNTED ON A PARTICULAR POST.
- TYPICAL SIGN PLACEMENT SHALL BE 2' FROM THE FACE OF CURB OR NEAREST SIDEWALK EDGE TO THE NEAR EDGE OF THE SIGN.

SITE INFORMATION

EXISTING ZONING: I-1 LIGHT INDUSTRIAL ZONING DISTRICT

SITE AREA: 47,320 SF. OR 1.086 ACRES (TOTAL)

SITE ADDRESS: 24295 HAGGERTY ROAD

MIN. YARD SETBACKS: REQUIRED PROPOSED

FRONT (WEST)	40'	10.0' FT.
FRONT (NORTH)	40'	70.3' FT.
FRONT (NORTH)	40'	89.9' FT.
SIDE (EAST)	20'	59.6' FT.
SIDE (SOUTH)	20'	68.0' FT.

MIN. PARKING SETBACKS: REQUIRED PROPOSED

FRONT (EAST)	10'	10' FT.
FRONT (SOUTH)	10'	10' FT.
REAR (WEST)	40'	NA
REAR (NORTH)	40'	NA

MAX. BLDG. HEIGHT: 40' 26.083 FT.

BUILDING AREA: FOOTPRINT: 8400 SQFT
 MEZZANINE: 3651 SQFT

BUILDING USE: M-MERCANTILE

NUMBER OF EMPLOYEES IN THE LARGEST SHIFT: 5 EMPLOYEES

BICYCLE PARKING: 2 SPACES

VEHICLE PARKING: ONE (1) FOR EACH SEVEN HUNDRED (700SQFT) SQUARE FEET OF USABLE FLOOR AREA OR 5 SPACES + 1 SPACE FOR EACH 1.5 EMPLOYEES IN THE LARGEST WORKING SHIFT, WHICH EVER IS GREATER.

8,400 SF / 700 SF = 12

REQUIRED: 12 SPACES
 2 HANDICAP STALLS REQUIRED

PROVIDED: 22 PARKING
 2 HANDICAP STALL
 2 VAN ACCESSIBLE SPACE

LOT COVERAGE:

SURFACE	AREA (SF)	% LOT COVERAGE
BUILDING	8,400 SF	17.75%
IMPERVIOUS	19,079 SF	40.31%
LANDSCAPING	19,841 SF	41.94%
TOTAL	47,320 SF	100.00%

CITY OF NOVI SIGNING AND STRIPING NOTES

ALL ROADSIDE SIGNS SHOULD BE INSTALLED TWO FEET FROM THE FACE OF THE CURB TO THE NEAR EDGES OF THE SIGN

SINGLE SIGNS WITH NOMINAL DIMENSIONS OF 12" x 18" OR SMALLER IN SIZE SHALL BE MOUNTED ON A GALVANIZED 2 LB. U-CHANNEL POST. MULTIPLE SIGNS AND/OR SIGNS WITH NOMINAL DIMENSION GREATER THAN 12" x 18" SHALL BE MOUNTED ON A GALVANIZED 3 LB. OR GREATER U-CHANNEL POST AS DICTATED BY THE WEIGHT OF THE PROPOSED SIGNS.

ALL GROUND MOUNTED SIGNS SHALL HAVE A MINIMUM BOTTOM HEIGHT OF SEVEN FEET FROM FINISHED GRADE.

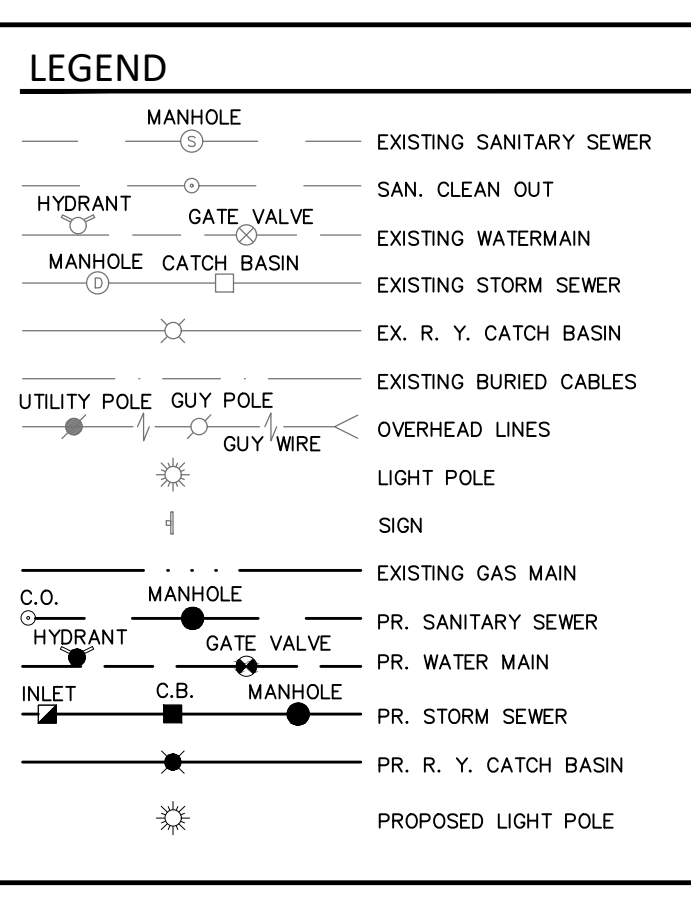
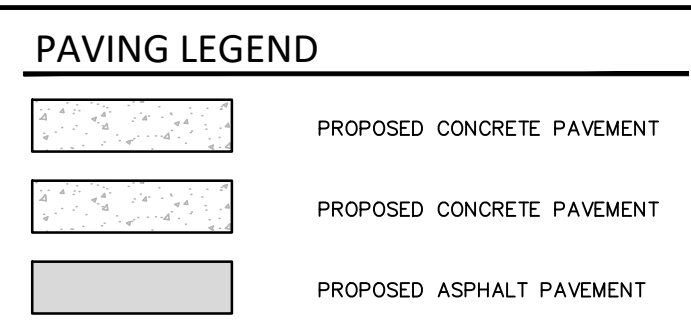
TRAFFIC CONTROL SIGNS SHALL USE THE FHWA STANDARD ALPHABET SERIES.

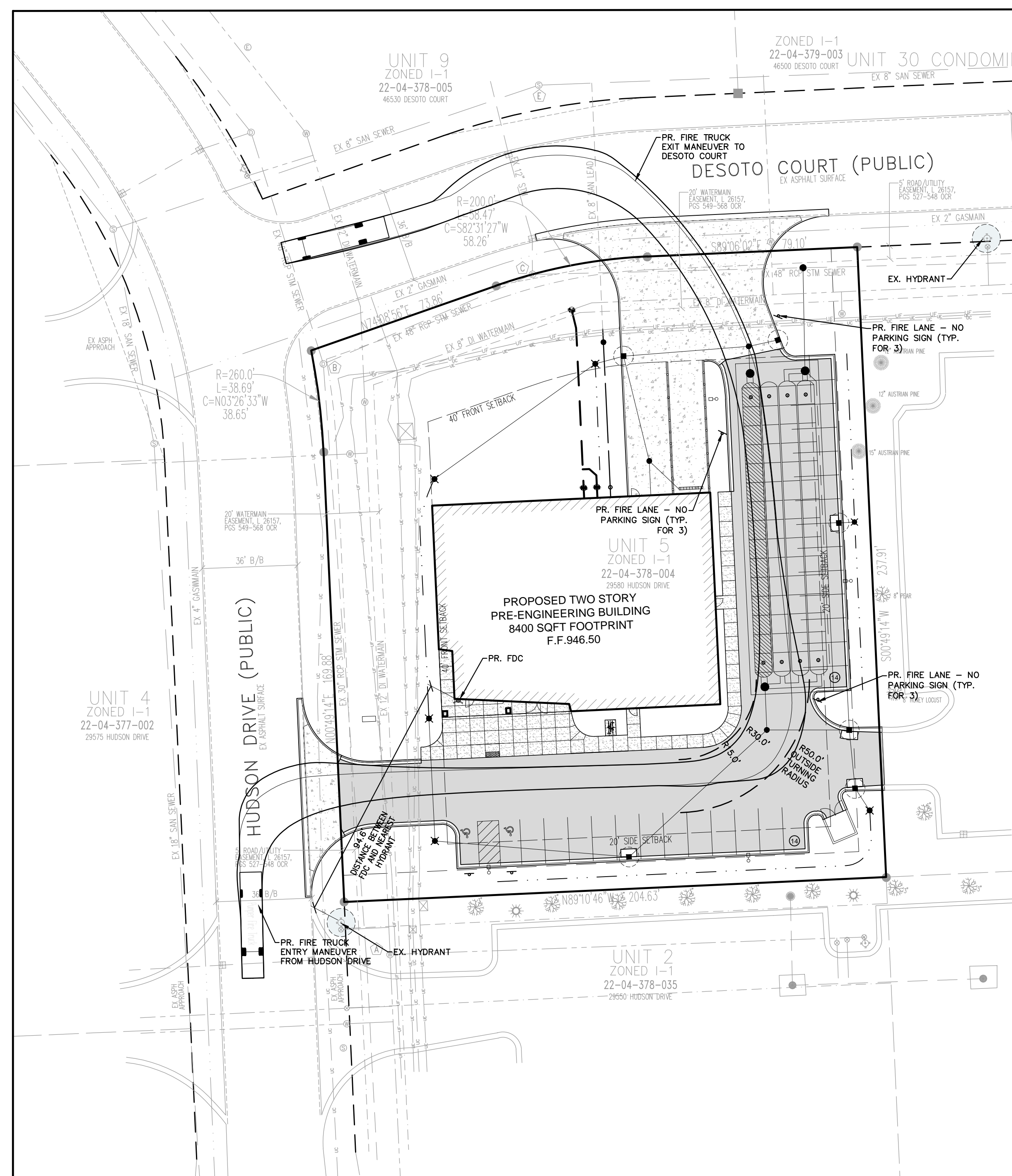
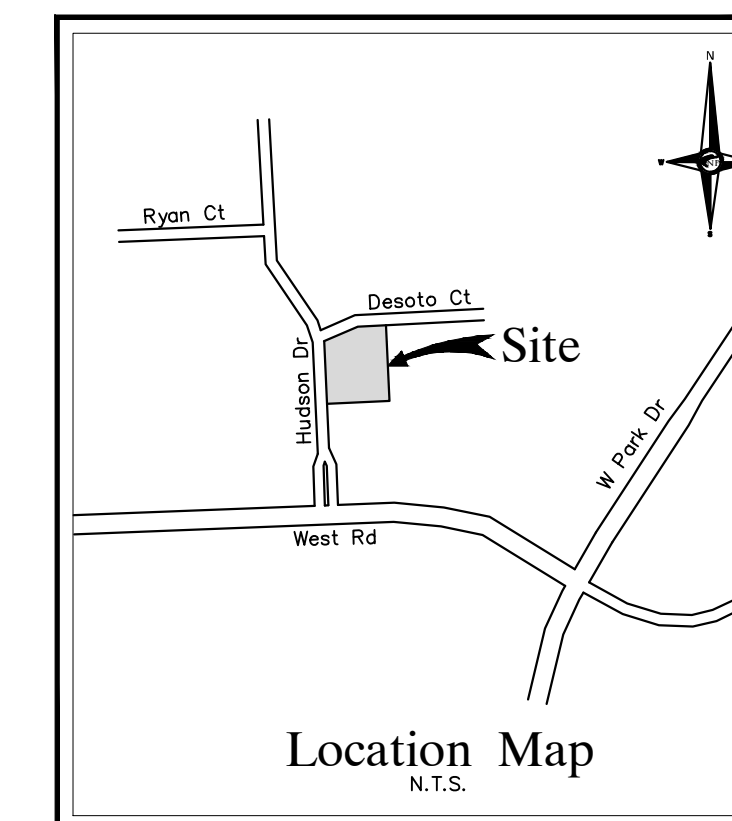
TRAFFIC CONTROL SIGNS SHALL HAVE HIGH INTENSITY PRISMATIC (HIP) SHEETING TO MEET FHWA RETROREFLECTIVITY REQUIREMENTS.

PARKING STRIPING MUST BE WHITE. BLUE MAY BE USED FOR ACCESSIBLE PARKING SPACES, WHERE A STANDARD PARKING SPACE IS LOCATED NEXT TO AN ACCESSIBLE PARKING SPACE. A WHITE LINE SHALL ABUT A BLUE LINE. PARKING STRIPING SHALL BE FOUR INCHES IN WIDTH.

THE INTERNATIONAL SYMBOL FOR ACCESSIBILITY SHALL BE WHITE OR WHITE WITH A BLUE BACKGROUND AND WHITE BORDER.

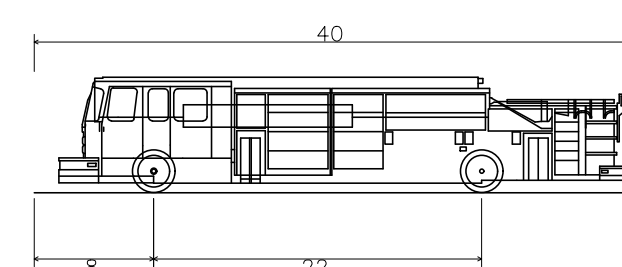
ALL TRAFFIC SIGNAGE WILL COMPLY WITH THE CURRENT MUTCD STANDARDS.



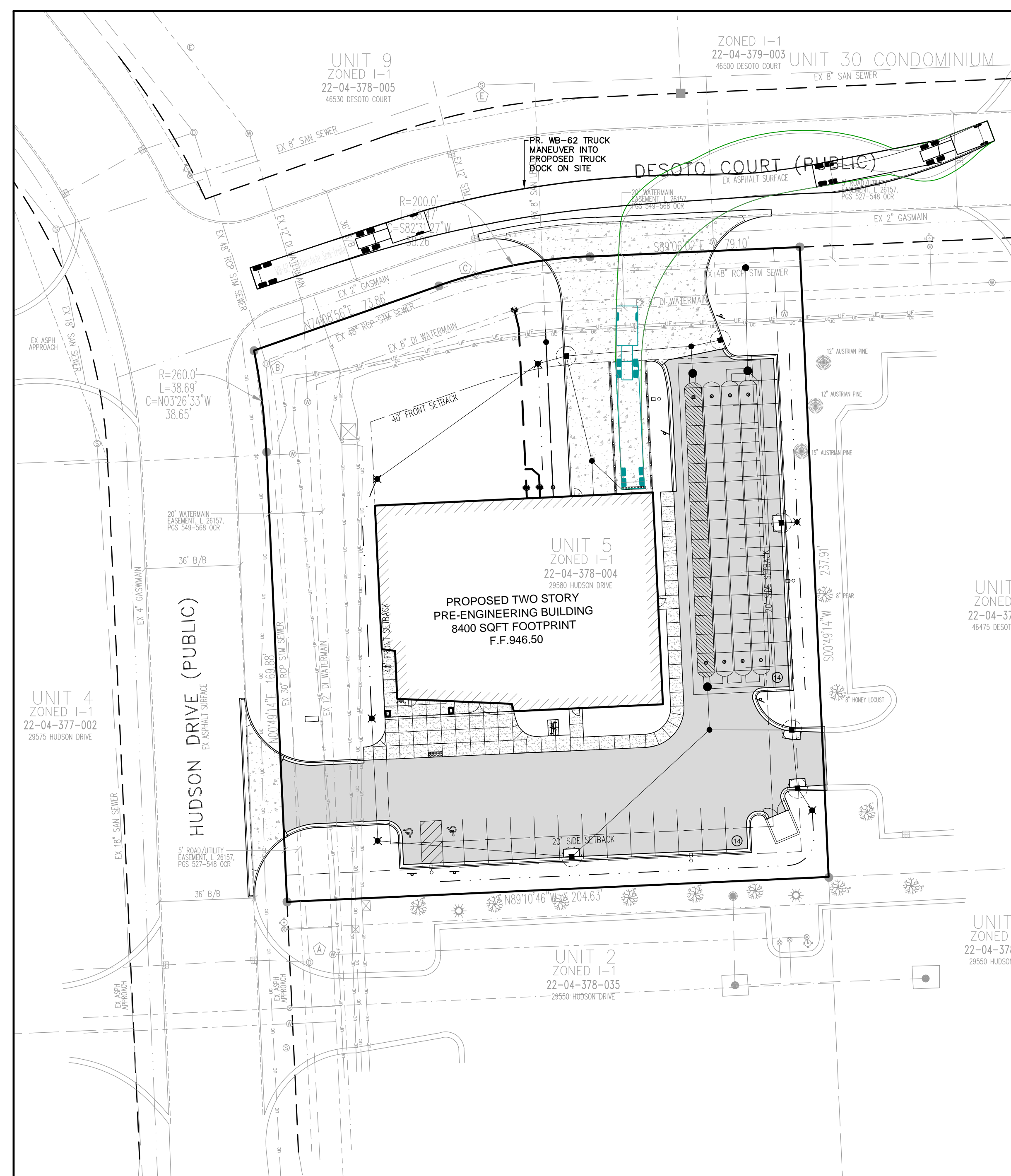


EMERGENCY VEHICLE MANEUVERING DIAGRAM

SCALE: 1" = 30'

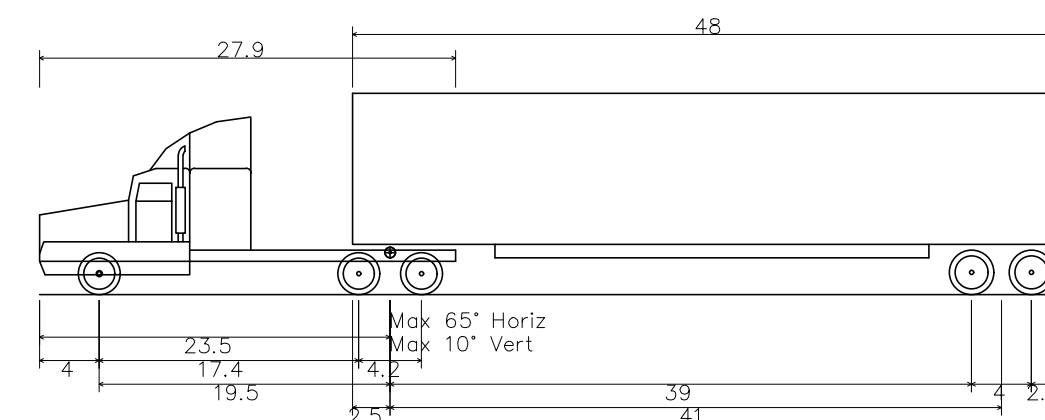


Pumper Fire Truck
Overall Length 40.000ft
Overall Width 8.167ft
Overall Body Height 7.745ft
Min Body Ground Clearance 0.656ft
Track Width 8.167ft
Lock-to-lock time 5.00s
Max Wheel Angle 45.00°

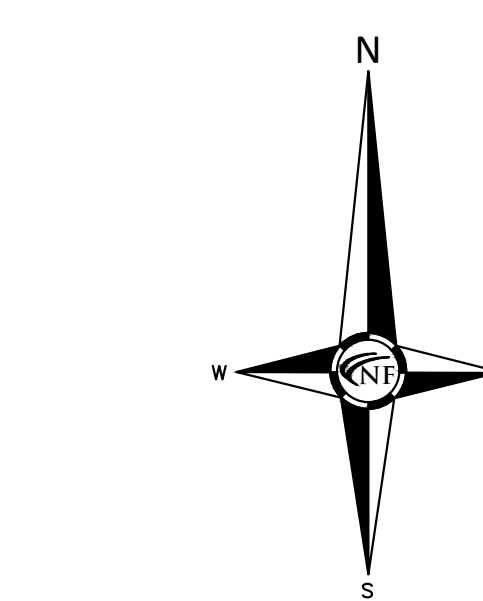


WB-62 TRUCK MANEUVER

SCALE: 1" = 30'



WB-62 - Interstate Semi-Trailer
Overall Length 69.000ft
Overall Width 8.500ft
Overall Body Height 13.500ft
Min Body Ground Clearance 1.334ft
Max Track Width 8.500ft
Lock-to-lock time 6.00s
Max Steering Angle (Virtual) 28.40°



FIRE DEPARTMENT NOTES

ALL FIRE HYDRANTS MUST BE INSTALLED AND OPERATIONAL PRIOR TO ANY COMBUSTIBLE MATERIAL BEING BROUGHT ON SITE.

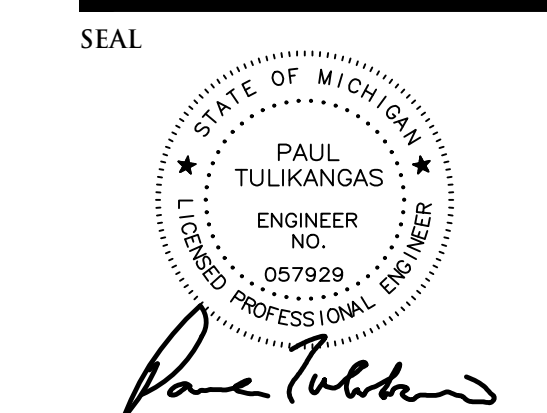
01-19-22 ISSUED FOR OWNER REVIEW
02-01-22 ISSUED FOR PRELIM. SITE PLAN REVIEW
03-22-2023 REVISED PER CITY REVIEW

ALL BUILDINGS MUST COMPLY WITH THE INTERNATIONAL FIRE CODE SECTION 510 FOR EMERGENCY RADIO COVERAGE. TO BE IMPLEMENTED BY THE TIME OF THE FINAL INSPECTION OF THE FIRE ALARM AND FIRE SUPPRESSION.

FIRE APPARATUS ACCESS DRIVES TO AND FROM BUILDINGS THROUGH PARKING LOTS SHALL HAVE A MINIMUM 50 FEET OUTSIDE TURNING RADIUS AND DESIGNED TO SUPPORT A MINIMUM OF 35 TONS.

LEGEND

- MANHOLE
- HYDRANT
- MANHOLE CATCH BASIN
- UTILITY POLE
- GUY POLE
- GUY WIRE
- EXISTING SANITARY SEWER
- SAN. CLEAN OUT
- EXISTING WATERMAIN
- EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
- EXISTING BURIED CABLES
- OVERHEAD LINES
- LIGHT POLE
- SIGN
- EXISTING GAS MAIN
- C.O. MANHOLE
- HYDRANT
- INLET
- GATE VALVE
- C.B. MANHOLE
- PR. SANITARY SEWER
- PR. WATER MAIN
- PR. STORM SEWER
- PR. R. Y. CATCH BASIN
- PROPOSED LIGHT POLE



PROJECT
Beck North Unit 5 Industrial Office Building - 29580 Hudson Drive (JSP 22-54)

CLIENT
CopperRock Construction
601 Fifth Street NW
Suite 300
Grand Rapids, MI 49504
Tel. (616) 570-2382

Contact: Matthew Hall,
Pre-construction Manager

PROJECT LOCATION
Part of the SW 1/4 of Section 4
T.1N., R.8E.,
City of Novi,
Oakland County, Michigan

SHEET
Truck Maneuver Plan



DATE ISSUED/REVISED
01-19-22 ISSUED FOR OWNER REVIEW
02-01-22 ISSUED FOR PRELIM. SITE PLAN REVIEW
03-22-2023 REVISED PER CITY REVIEW

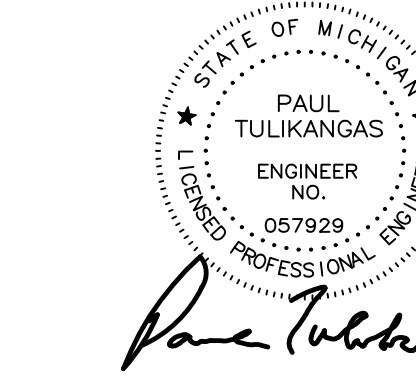
DRAWN BY:
J. Lawrey
DESIGNED BY:
G. Viju
APPROVED BY:
B. Buchholz

DATE:
January 19, 2022

SCALE: 1" = 20'
20 10 0 10 20 30

NFE JOB NO. SHEET NO.
N349 C4

SEAL



PROJECT
Beck North Unit 5 Industrial
Office Building - 29580
Hudson Drive (JSP 22-54)

CLIENT
CopperRock Construction
601 Fifth Street NW
Suite 300
Grand Rapids, MI 49504
Tel. (616) 570-2382

Contact: Matthew Hall,
Pre-construction Manager

PROJECT LOCATION
Part of the SW 1/4
of Section 4,
T.1N., R.8E.,
City of Novi,
Oakland County, Michigan

SHEET
Paving-Grading Plan



Know what's below
Call before you dig.

DATE ISSUED/REVISED
01-19-22 ISSUED FOR OWNER REVIEW
02-01-22 ISSUED FOR PRELIM. SITE PLAN REVIEW
03-22-2023 REVISED PER CITY REVIEW

DRAWN BY:
J. Lawrey

DESIGNED BY:
G. Viju

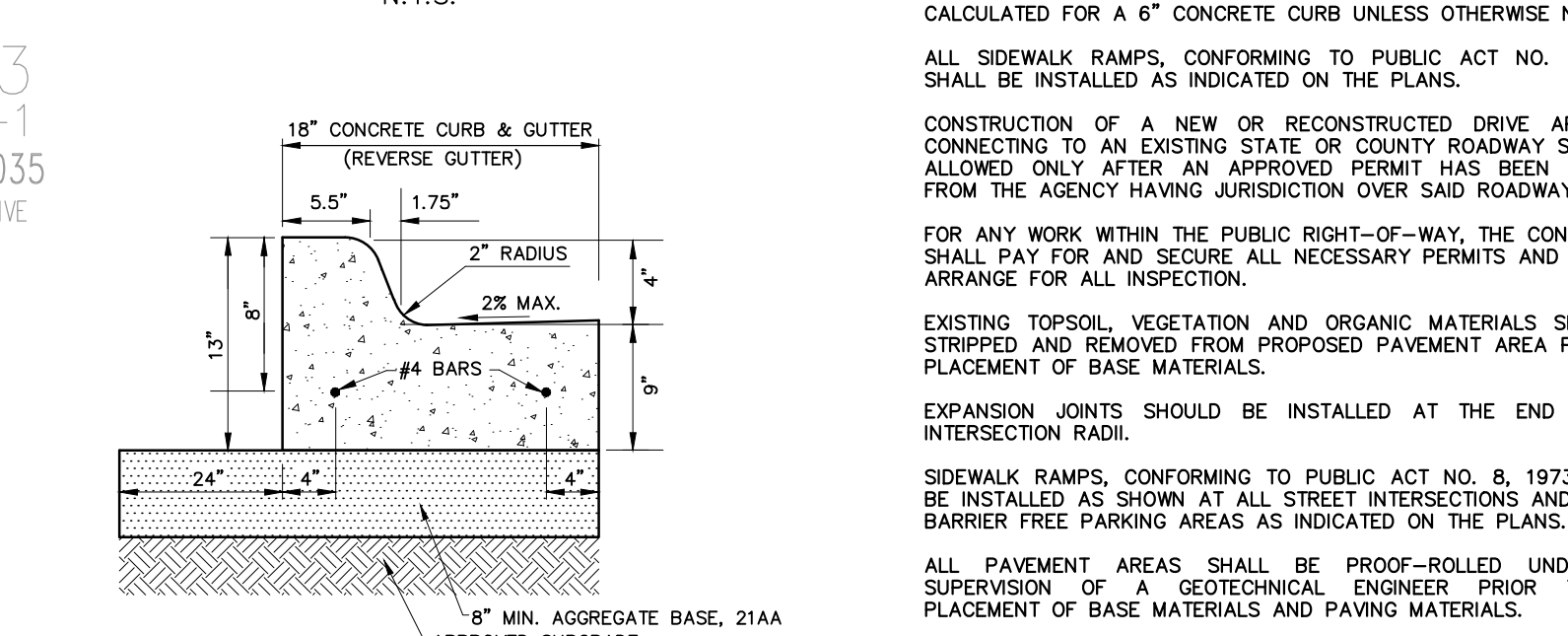
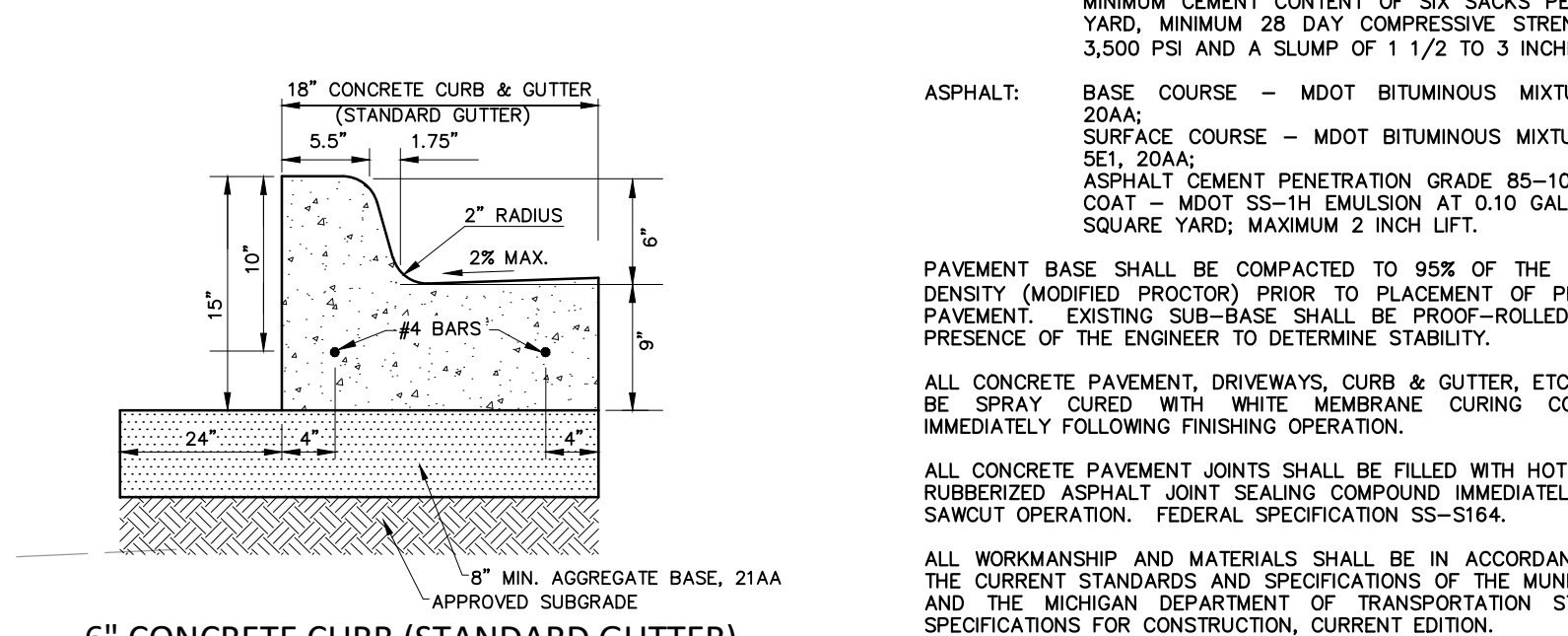
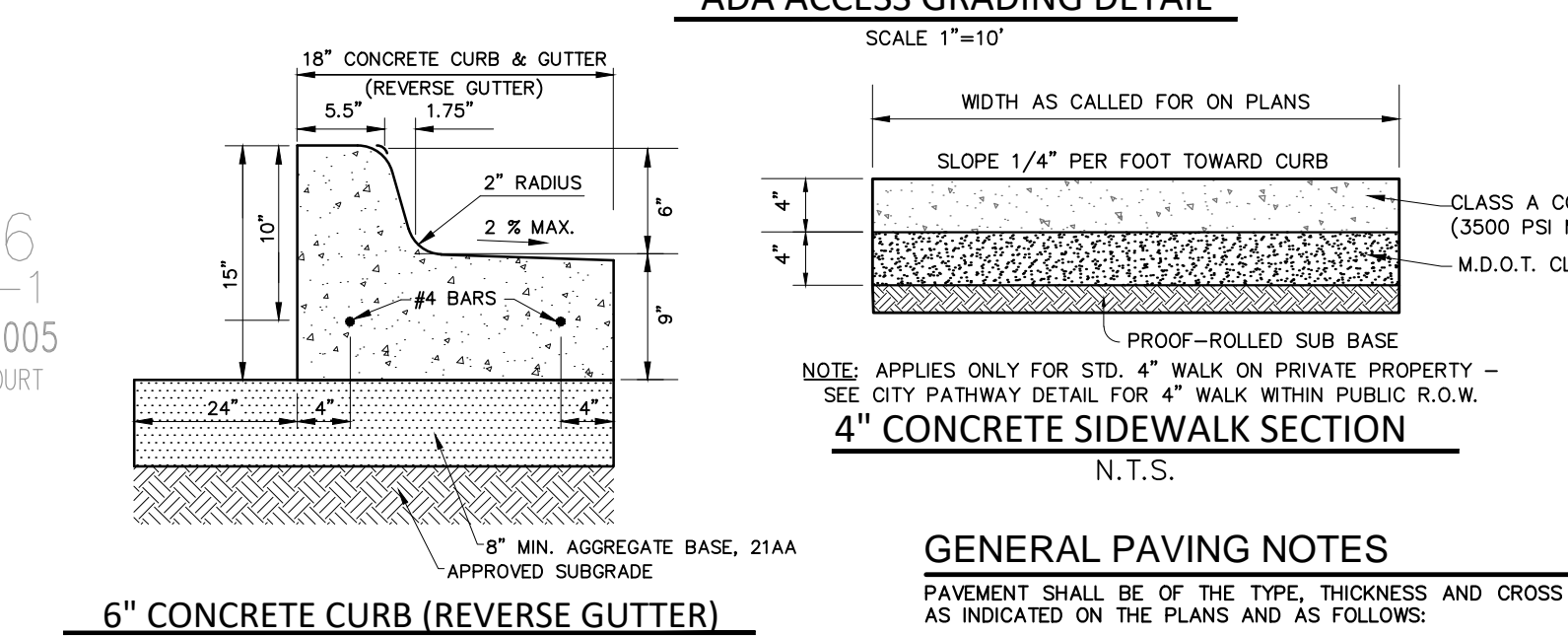
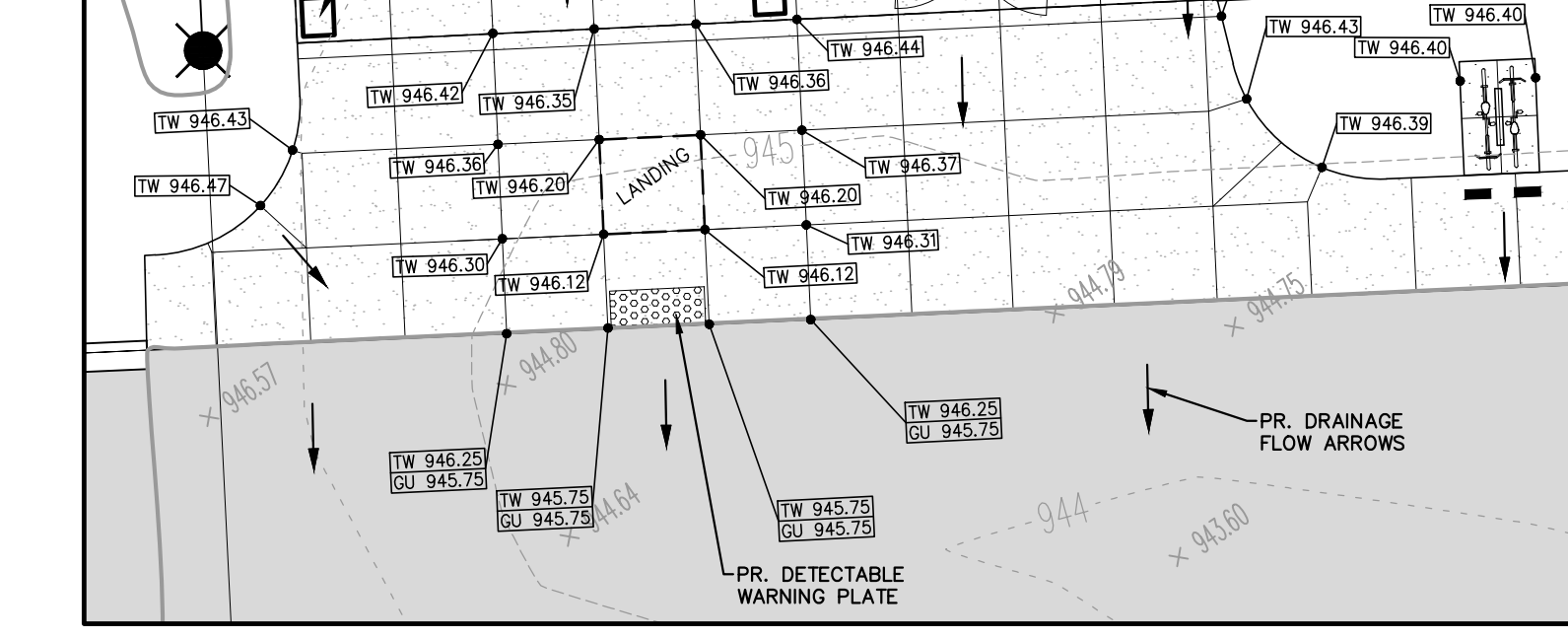
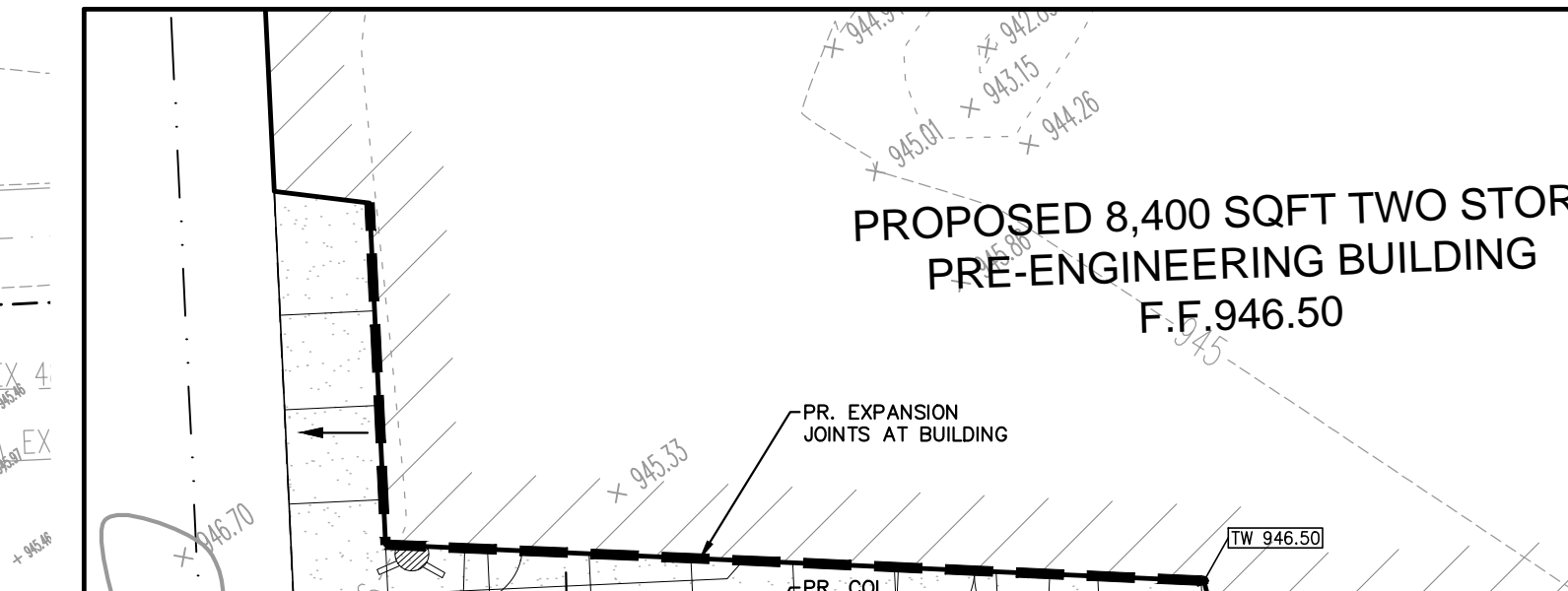
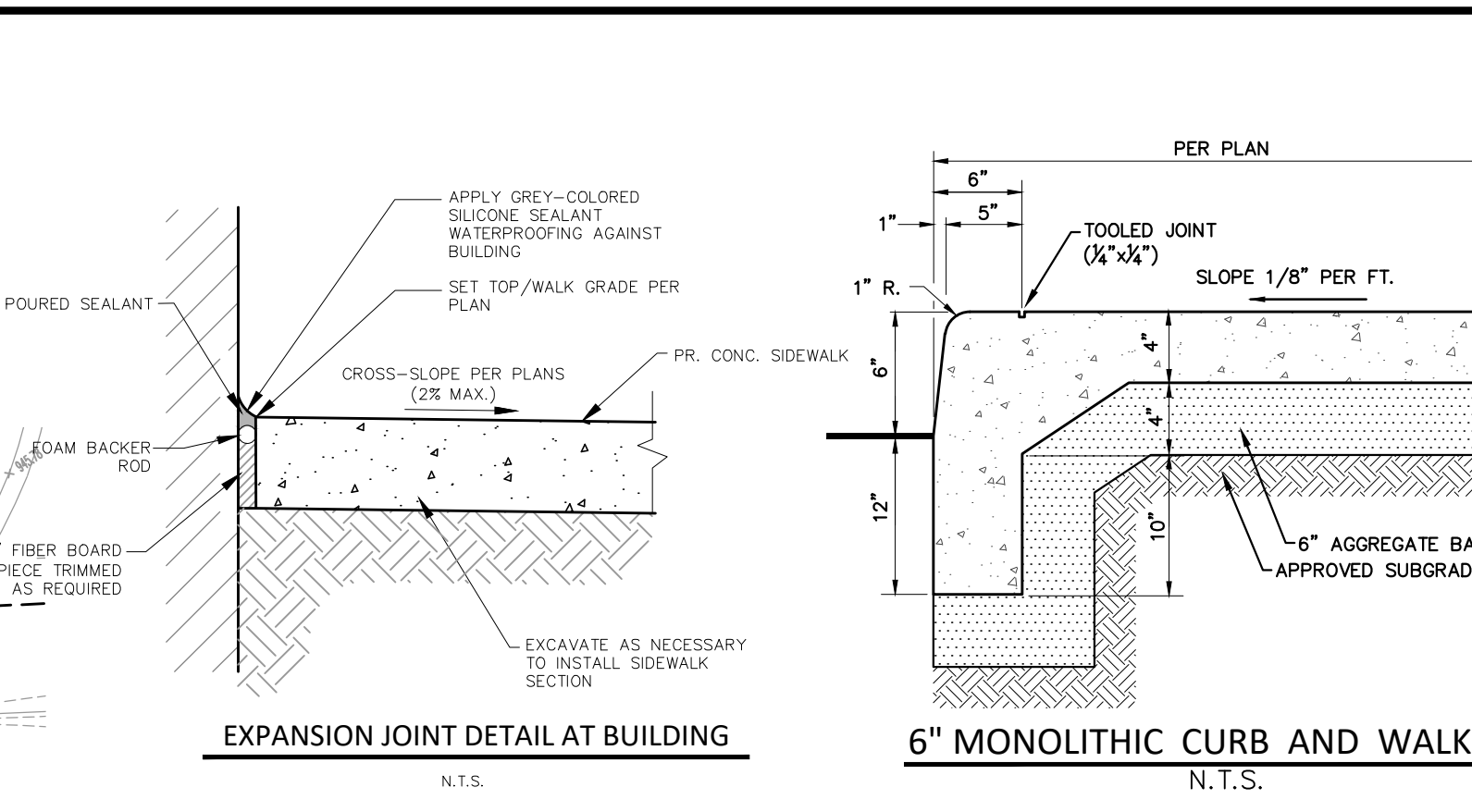
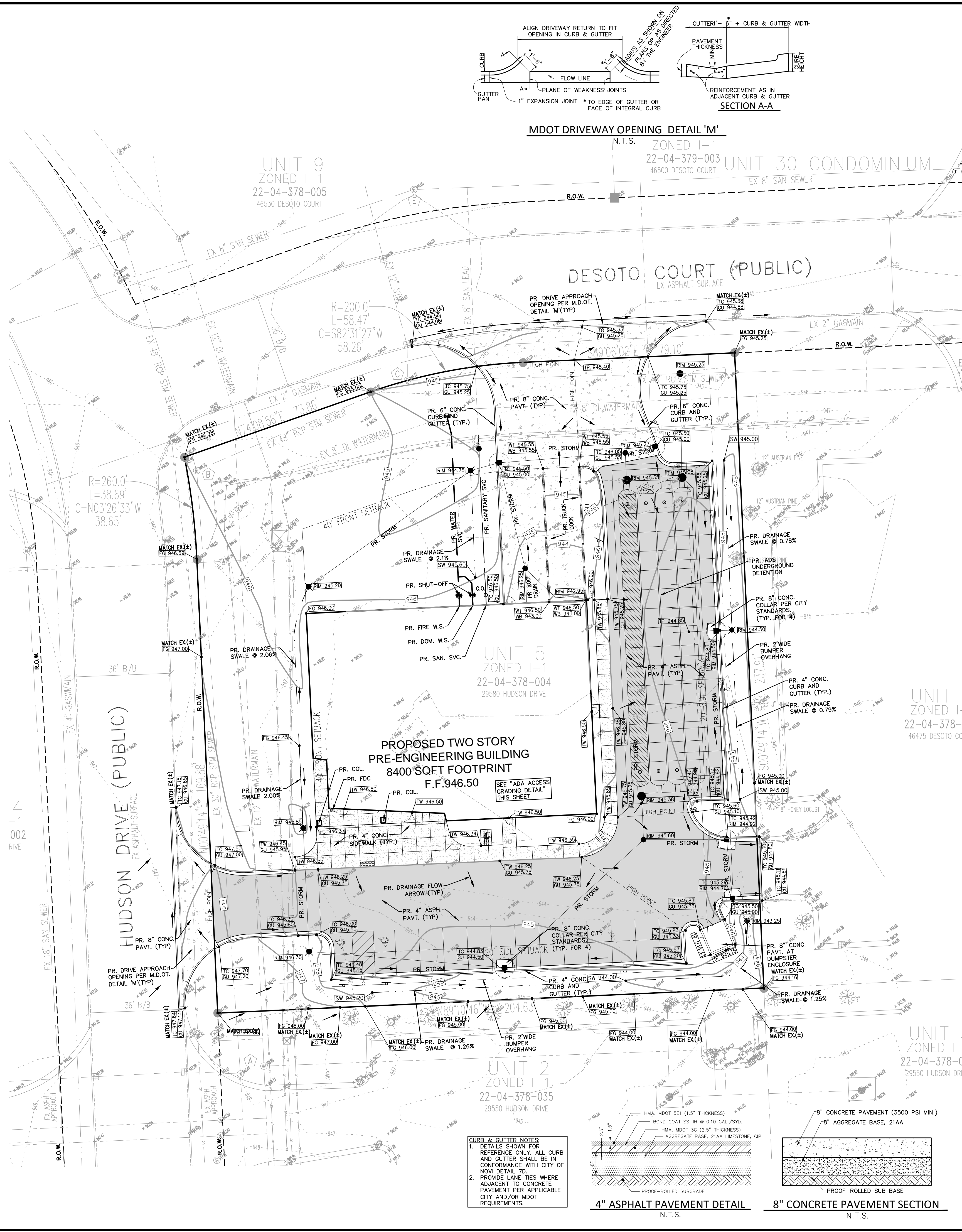
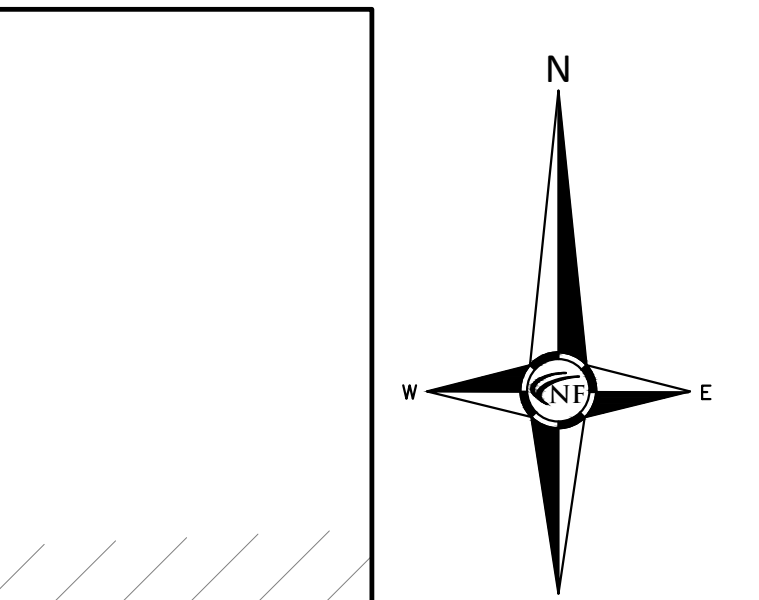
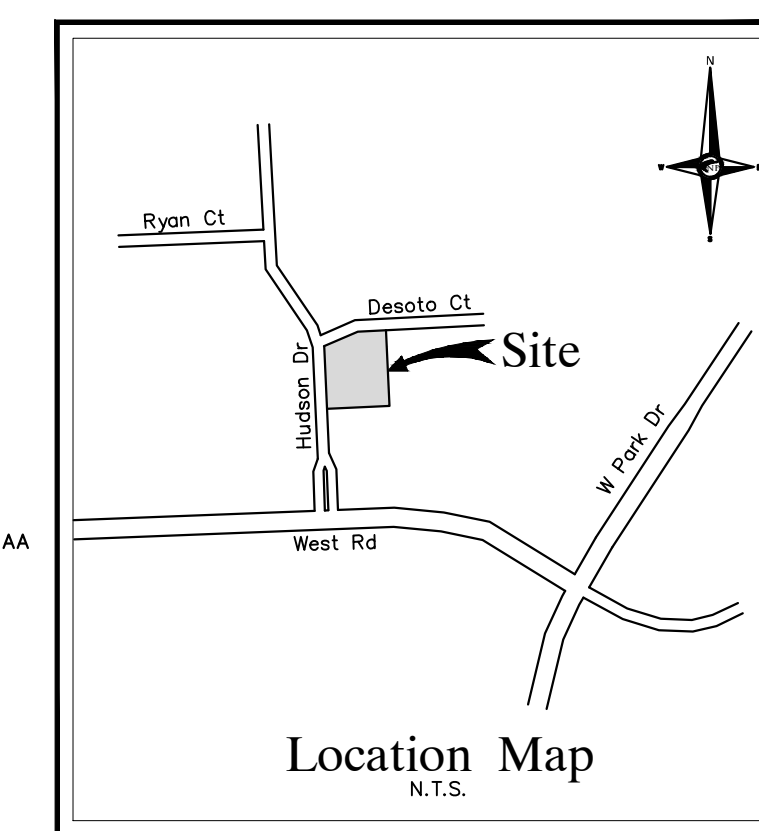
APPROVED BY:
B. Buchholz

DATE:
January 19, 2022

SCALE: 1" = 20'

20 10 0 10 20 30

NFE JOB NO. SHEET NO.
N349 C5



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PAVING LEGEND

[Symbol]	PROPOSED 4" CONCRETE SIDEWALK
[Symbol]	PROPOSED 8" CONCRETE PAVEMENT
[Symbol]	PROPOSED 4" ASPHALT PAVEMENT

LEGEND

[Symbol]	MANHOLE	EXISTING SANITARY SEWER
[Symbol]	HYDRANT	SAN. CLEAN OUT
[Symbol]	MANHOLE CATCH BASIN	EXISTING WATERMAIN
[Symbol]	UTILITY POLE	EXISTING STORM SEWER
[Symbol]	GUY WIRE	EX. R. Y. CATCH BASIN
[Symbol]	GUY WIRE	EXISTING BURIED CABLES
[Symbol]	MANHOLE	OVERHEAD LINES
[Symbol]	MANHOLE	LIGHT POLE
[Symbol]	MANHOLE	SIGN
[Symbol]	MANHOLE	EXISTING GAS MAIN
[Symbol]	MANHOLE	PR. SANITARY SEWER
[Symbol]	MANHOLE	PR. WATER MAIN
[Symbol]	MANHOLE	PR. STORM SEWER
[Symbol]	MANHOLE	PR. R. Y. CATCH BASIN
[Symbol]	MANHOLE	PROPOSED LIGHT POLE
[Symbol]	MANHOLE	PR. TOP OF CURB ELEVATION
[Symbol]	MANHOLE	PR. GUTTER ELEVATION
[Symbol]	MANHOLE	PR. TOP OF WALK ELEVATION
[Symbol]	MANHOLE	PR. TOP OF P.V.M.T. ELEVATION
[Symbol]	MANHOLE	FINISH GRADE ELEVATION

GENERAL PAVING NOTES
PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:
CONCRETE: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES.
ASPHALT: BASE COURSE - MDOT BITUMINOUS MIXTURE 3C, 20AA; SURFACE COURSE - MDOT BITUMINOUS MIXTURE HMA SE1, 20AA; ASPHALT CEMENT PENETRATION GRADE 85-100, BOND COAT - MDOT SS-1H EMULSION AT 0.10 GALLON PER SQUARE YARD, MAXIMUM 2 INCH LIFT.
PAVEMENT BASE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.
ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.
ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT Poured RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-5164.
ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.
ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.
ALL SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.
CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.
FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL INSPECTION.
EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS.
EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RAMPS.
SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.
ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.
FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 98% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.

4" ASPHALT PAVEMENT DETAIL
N.T.S.

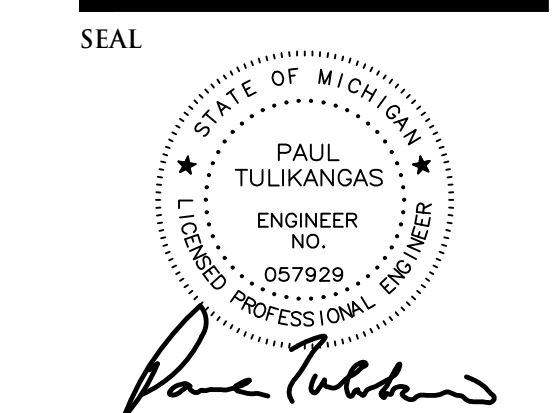
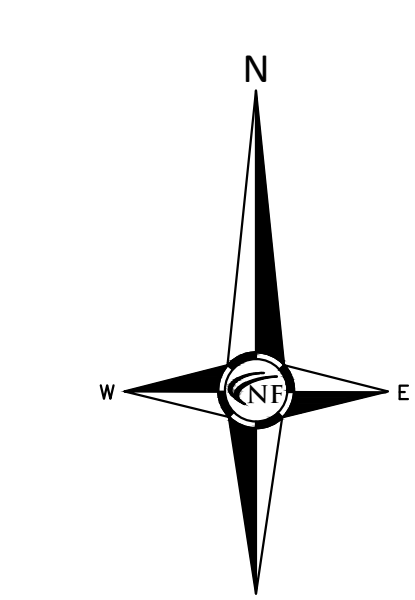
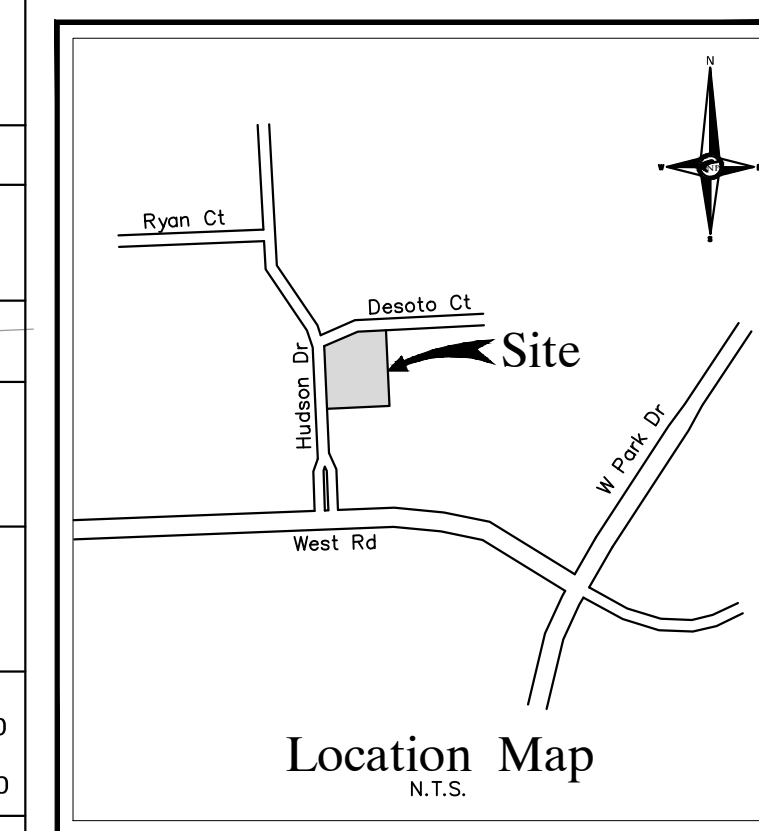
8" CONCRETE PAVEMENT SECTION
N.T.S.

4" CONCRETE CURB (STANDARD GUTTER)
N.T.S.

4" CONCRETE CURB (REVERSE GUTTER)
N.T.S.

4" CONCRETE CURB (STANDARD GUTTER)
N.T.S.

4" CONCRETE CURB (REVERSE GUTTER)
N.T.S.



PROJECT
 Beck North Unit 5 Industrial Office Building - 29580 Hudson Drive (JSP 22-54)

CLIENT
 CopperRock Construction
 601 Fifth Street NW
 Suite 300
 Grand Rapids, MI 49504
 Tel. (616) 570-2382

Contact: Matthew Hall,
 Pre-construction Manager

PROJECT LOCATION
 Part of the SW 1/4 of Section 4
 T.1N., R.8E.,
 City of Novi,
 Oakland County, Michigan

SHEET
 Utility Plan



DATE ISSUED/REVISED
 01-19-22 ISSUED FOR OWNER REVIEW
 02-01-22 ISSUED FOR PRELIM. SITE PLAN REVIEW
 03-22-2023 REVISED PER CITY REVIEW

DRAWN BY:
 J. Lawrey

DESIGNED BY:
 G. Viju

APPROVED BY:
 B. Buchholz

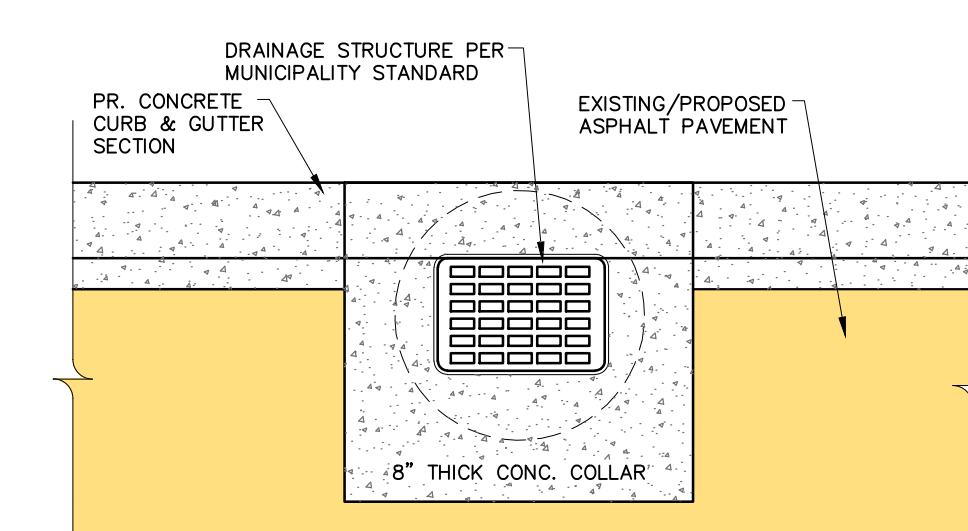
DATE:
 January 19, 2022

SCALE: 1" = 20'

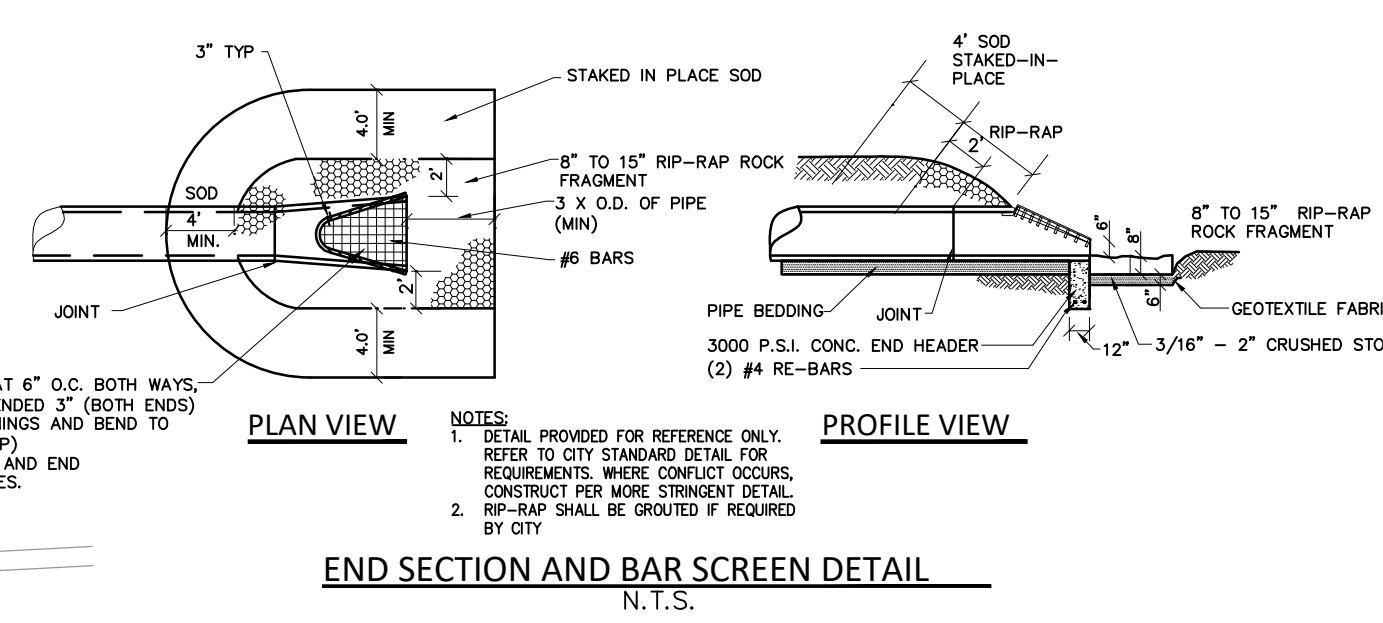
NFE JOB NO. SHEET NO.
 N349 C6

Structure Name	Structure Details
#CB11 PR. 2' DIA REAR YARD CATCH BASIN	PR. RIM 945.85 PR. 12" S. INV. 941.68
#CB2 PR. 4' DIA REAR YARD CATCH BASIN W/ 2' SUMP	PR. RIM 946.30 PR. 12" N. INV. 941.50 PR. 12" E. INV. 941.40
#CB3 PR. 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 944.50 PR. 12" W. INV. 940.50 PR. 12" NE. INV. 940.33
#CB4 PR. 4' DIA CATCH BASIN W/ 2' SUMP INSTALL CHECK VALVE ON 12" SOUTH OUTLET (TIDE FLEX BY RED VALVE OR EQUAL)	PR. RIM 944.76 PR. 12" SE. INV. 939.90 PR. 12" N. INV. 939.80
#CB5 PR. 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 944.92 PR. 12" S. INV. 939.70 PR. 12" N. INV. 939.70 PR. 12" W. INV. 939.60
#CB6 PR. 2' DIA REAR YARD CATCH BASIN	PR. RIM 945.20 PR. 12" NE. INV. 940.85
#CB7 PR. 4' DIA REAR YARD CATCH BASIN W/ 2' SUMP	PR. RIM 944.75 PR. 12" SW. INV. 940.52 PR. 12" E. INV. 940.42
#CB8 PR. 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 945.02 PR. 12" W. INV. 940.36 PR. 12" E. INV. 940.26 PVC PIPE 8" S. INV. 940.50
#CB9 PR. 2' DIA INLET	PR. RIM 945.00 PR. 12" W. INV. 940.83
#CB10 PR. 2' DIA REAR YARD CATCH BASIN	PR. RIM 944.50 PR. 12" W. INV. 940.33
#CB11 PR. 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 944.50 PR. 12" S. INV. 940.28 PR. 12" S. INV. 940.18
#CB12 PR. 2' DIA R.Y.C.B.	PR. RIM 943.25 PR. 12" NW. INV. 939.95
#FD1 PR. 4' DIA FLOW DIVERSION MANHOLE W/ 4' SUMP	PR. RIM 945.38 PR. 12" S. INV. 939.20 PR. 12" E. INV. 940.30 PR. 12" N. INV. 939.20
#FD2 PR. 4' DIA FLOW DIVERSION MANHOLE W/ 4' SUMP	PR. RIM 945.35 PR. 12" N. INV. 939.80 PR. 12" S. INV. 939.20 PR. 12" E. INV. 940.30
#MH1 PR. 4' DIA MANHOLE	PR. RIM 946.25 PVC PIPE 8" N. INV. 940.90 PVC PIPE 8" S. INV. 942.25 PVC PIPE 8" SE. INV. 941.00
#MH2 PR. 6' DIA MANHOLE (CONSTRUCT ONLINE)	PR. RIM 945.25 PR. 12" S. INV. 938.00 EX. 48" E. INV. 936.59 EX. 48" W. INV. 936.59
#OC1 PR. 6' DIA OUTLET CONTROL MANHOLE W/ VIER WALL, RESTRICTION & 2' SUMP	PR. RIM 945.08 PR. 12" N. INV. 938.33 PR. 12" S. INV. 938.35 PR. 6" SE. INV. 938.35
#PT1 PR. 4' DIA MANHOLE	PR. RIM 945.60 PR. 12" SW. INV. 939.94 PR. 12" E. INV. 939.45 PR. 12" N. INV. 939.35
#PT2 PR. 4' DIA MANHOLE	PR. RIM 945.27 PR. 12" W. INV. 940.00 PR. 12" S. INV. 939.90

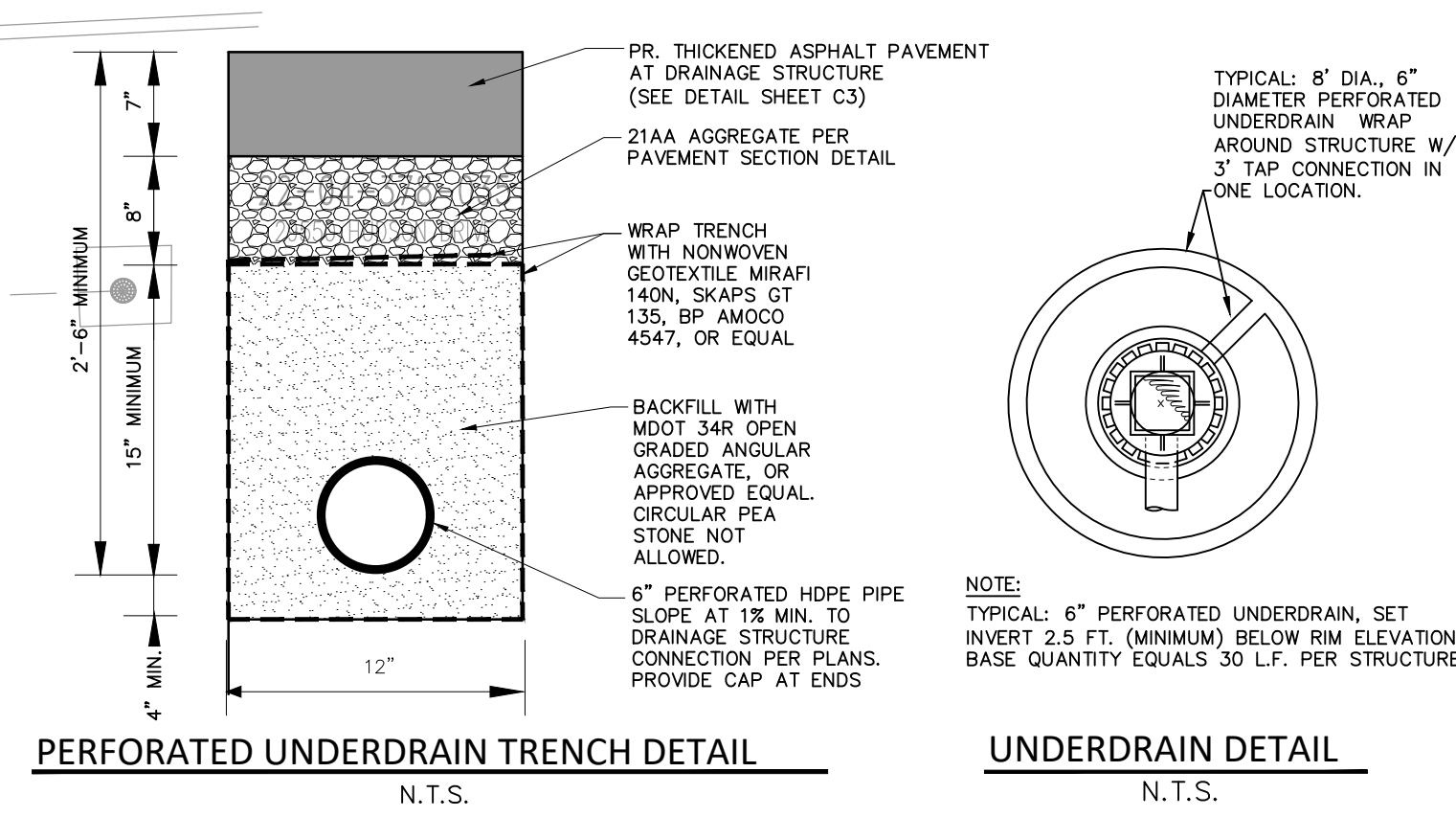
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DRAINAGE STRUCTURE BOXOUT DETAIL I
 N.T.S.



END SECTION AND BAR SCREEN DETAIL
 N.T.S.

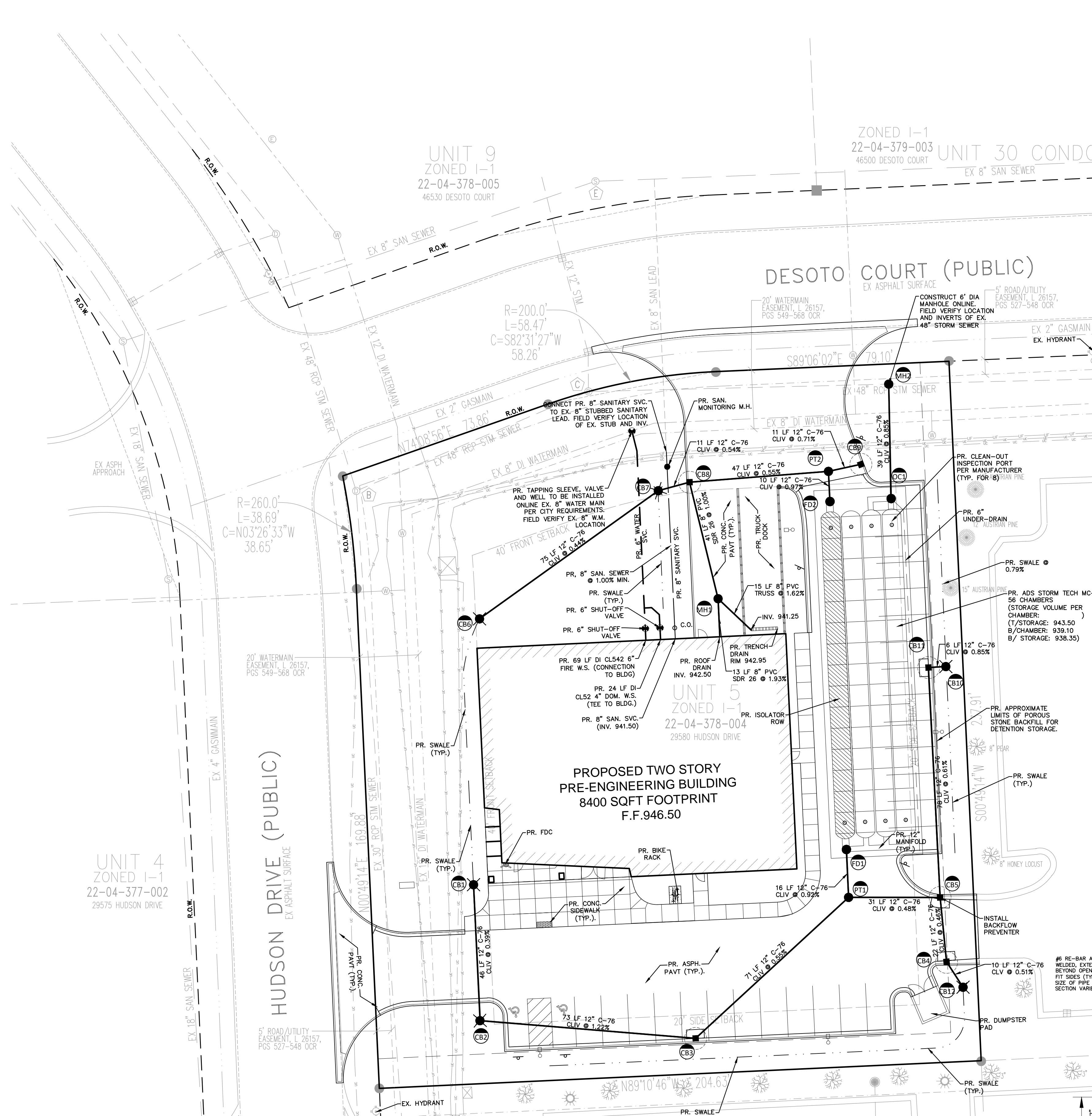


PERFORATED UNDERDRAIN TRENCH DETAIL
 N.T.S.

UNDERDRAIN DETAIL
 N.T.S.

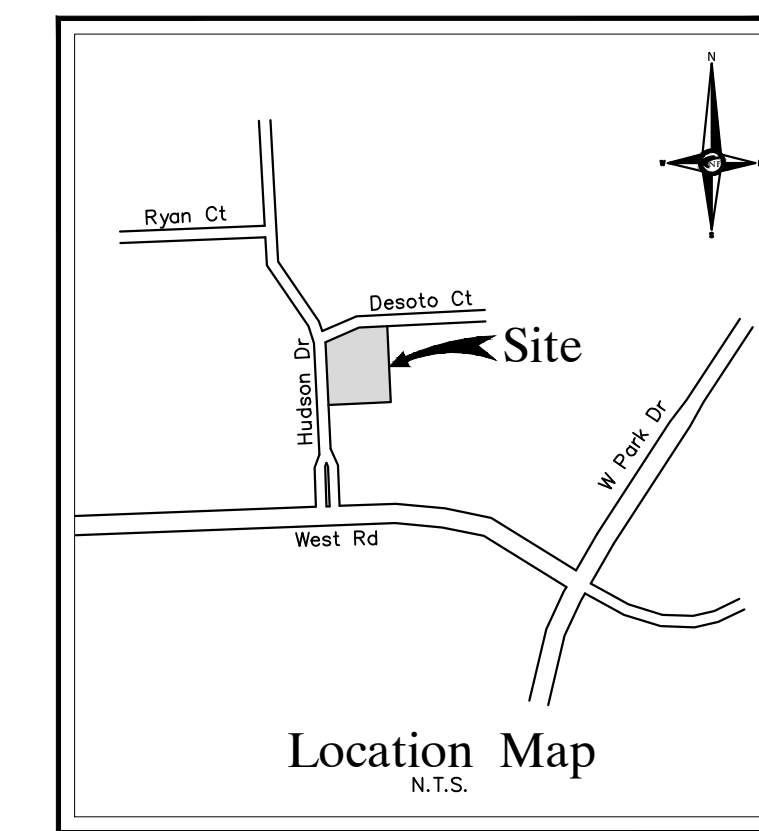
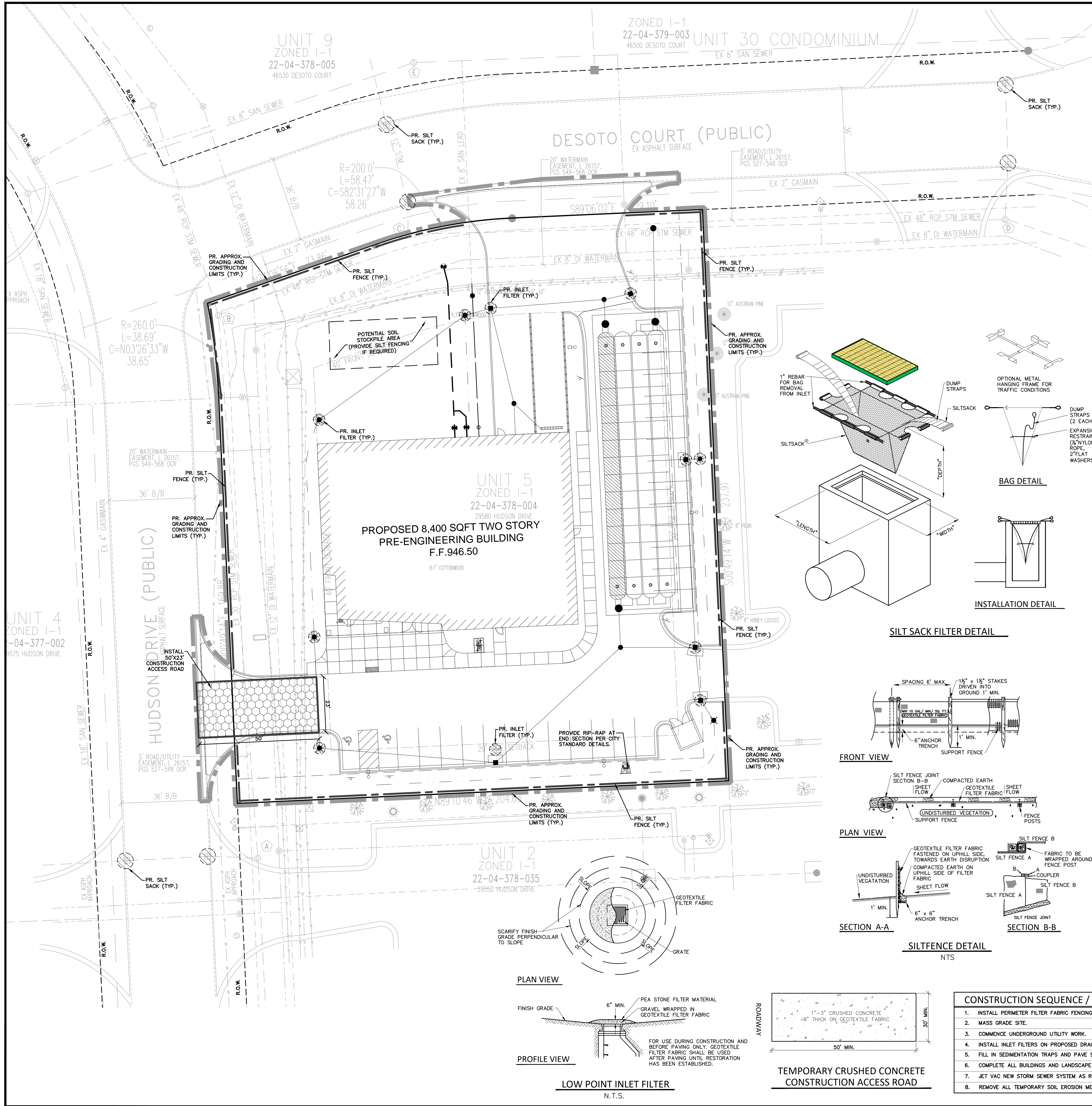
LEGEND

MANHOLE	EXISTING SANITARY SEWER
HYDRANT	SAN. CLEAN OUT
MANHOLE	EXISTING WATER MAIN
MANHOLE	CATCH BASIN
UTILITY POLE	EXISTING STORM SEWER
GUY POLE	EX. R. Y. CATCH BASIN
GUY WIRE	EXISTING BURIED CABLES
	OVERHEAD LINES
	LIGHT POLE
	SIGN
C.O.	EXISTING GAS MAIN
HYDRANT	PR. SANITARY SEWER
INLET	PR. WATER MAIN
C.B.	PR. STORM SEWER
MANHOLE	PR. R. Y. CATCH BASIN
	SAND BACKFILL (95% DENSITY)
	PROPOSED LIGHT POLE



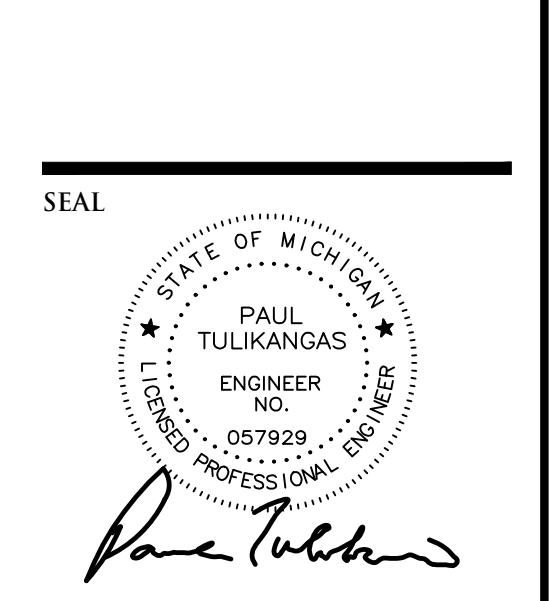
SANITARY SEWER BASIS OF DESIGN

Use	Qty.	Unit Factor	REUs
Office:	11,051 S.F.	@ 0.40 Per 1,000 S.F.	= 4.42 REUs
Total REUs			= 4.42 REUs
Equivalent Population		= 2.38 People Per REU	
Total Population		= 11 People	
Average Flow	= 100 Gal/Per/Day * Population 7.48 gal/cf * 86,400 sec/day		
Average Flow	= 1052.06 GPD	= 0.0016 CFS	
Peak Factor	= 18 + (# of Persons/1000) ^ 0.50 4 + (# of Persons/1000) ^ 0.50		
Peak Flow	= Peak Factor * Average Flow 2229.47 GPD	= 0.0034 CFS	
Proposed Sanitary Sewer:	8 in. Dia. @ 1.00 %		= 1.208 CFS



NF ENGINEERS
 CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS
 46777 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257
 WWW.NOWAKFRAUS.COM



PROJECT
 Beck North Unit 5 Industrial Office Building - 29580 Hudson Drive (JSP 22-54)

CLIENT
 CopperRock Construction
 601 Fifth Street NW Suite 300
 Grand Rapids, MI 49504
 Tel. (616) 570-2382

Contact: Matthew Hall,
 Pre-construction Manager

PROJECT LOCATION
 Part of the SW 1/4 of Section 4, T.1N., R.8E., City of Novi, Oakland County, Michigan

SHEET
 Soil Erosion and Sedimentation Control Plan



DATE ISSUED/REVISED
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NOTES
 REFER TO THE WRC SOIL EROSION AND SEDIMENTATION CONTROL DETAIL SHEET FOR ALL ADDITIONAL NOTES & DETAILS (TYP)

SOIL DATA
 THIS SITE CONSISTS OF 17A (WASEPI SANDY LOAM, 0 TO 3 PERCENT SLOPES) BASED ON DATA PROVIDED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE.

DRAWN BY:
 J. Lawrey

DESIGNED BY:
 G. Viju

APPROVED BY:
 B. Buchholz

DATE:
 January 19, 2022

SCALE: 1" = 20'

NFE JOB NO. SHEET NO.
 N349 C10

SESC INSTALLATION NOTE
 INSTALLATION OF SILT FENCING AND TREE PROTECTION FENCING SHALL NOT OCCUR PRIOR TO THE INITIAL CITY PRE-CONSTRUCTION MEETING. WHEN NATURAL FEATURES EXIST, INSPECTION OF STAKING MAY BE REQUIRED PRIOR TO FENCE INSTALLATION.

PRE-TREATMENT MAINTENANCE NOTE
 PRE-TREATMENT STRUCTURE SHALL BE INSPECTED WEEKLY FOR SEDIMENT ACCUMULATION UNTIL SITE IS STABILIZED, AND SHALL BE CLEANED AS REQUIRED.

DEWATERING NOTE
 IF DEWATERING IS ANTICIPATED OR ENCOUNTERED CONDITIONS REQUIRE DEWATERING DURING CONSTRUCTION A DEWATERING PLAN MUST BE SUBMITTED TO THE CITY OF NOVI ENGINEERING DIVISION FOR REVIEW.

UTILITY INSTALLATION NOTE
 IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO GRADE AND STABILIZE DISTURBANCES DUE TO THE INSTALLATION OF PUBLIC UTILITIES.

EROSION CONTROL BLANKET NOTE
 SLOPES STEEPER THAN 1V:6H (16%) SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS.

MAINTENANCE OF SESC MEASURES & DUST CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING WEEKLY AND POST RAINFALL INSPECTION & MAINTENANCE OF ALL SOIL EROSION & SEDIMENTATION CONTROL MEASURES.
2. REMOVE ACCUMULATION OF SEDIMENT & DEBRIS IN CONSTRUCTION ENTRANCE, SILT FENCE, LOW POINT INLET FILTERS AND MANHOLE SUMPS. ALSO, ACCUMULATED SEDIMENT AND DEBRIS ON ROADWAYS SHALL BE REMOVED.
3. SOIL EROSION & SEDIMENTATION CONTROL MEASURES FOUND IMPROPERLY INSTALLED SHALL BE RE-INSTALLED TO MEET THE DESIRED FUNCTION.
4. DUST SHALL BE CONTROLLED DAILY, OR AS NEEDED, TO A MINIMUM BY USE OF A WATER TRUCK AND/OR DUST CONTROL MATERIALS. SWEEP STREETS ADJACENT TO SITE AS REQUIRED.

SOIL EROSION CONTROL - SEQUENCE OF OPERATION (NEW CONSTRUCTION)
 INSTALL CRUSHED CONCRETE ACCESS DRIVE AND TEMPORARY CULVERTS AT THE SITE ENTRANCE AS INDICATED ON THE PLANS.

INSTALL SILT FENCE OR SIMILAR APPROVED SILT BARRIER ALONG PROPERTY LINES AND AROUND SENSITIVE NATURAL FEATURES AS INDICATED ON THE PLANS.

EXCAVATE A SHALLOW SWALE/DITCH AROUND PERIMETER OF SITE. GRADE THE TEMPORARY SWALE TO AN EXISTING DRAINAGE FACILITY. PLACE OUTLET FILTER IN EXISTING UPSTREAM STORM SEWER FACILITIES.

IF INDICATED ON CONSTRUCTION PLANS, SEDIMENTATION BASINS, DETENTION POND, ETC., SHALL BE CONSTRUCTED PRIOR TO THE INSTALLATION OF ANY OTHER WORK.

STRIP EXISTING TOPSOIL, VEGETATION AND ORGANIC MATTER FROM BUILDING PAD AND PARKING AREAS. COMMENCE LAND BALANCE AND MASS GRADING OPERATIONS. MAINTAIN A MINIMUM BUFFER OF 15' OF EXISTING VEGETATION WHEREVER POSSIBLE AROUND SITE PERIMETER. STOCK PILES SHOULD BE LOCATED AWAY FROM EXISTING DRAINAGE FACILITIES.

EXCAVATE AND INSTALL UNDERGROUND UTILITIES. INSTALL PEASTONE INLET FILTERS AROUND ALL NEW STORM SEWER FACILITIES AS INDICATED ON THE PLANS. EXISTING AND PROPOSED STORM SEWER FACILITIES SHALL BE PROTECTED FROM EROSION AND SEDIMENT INFILTRATION AT ALL TIMES.

COMMENCE FINAL GRADING AND TRIMMING OPERATIONS. PREPARE SUBGRADE FOR INSTALLATION OF PROPOSED PAVEMENT.

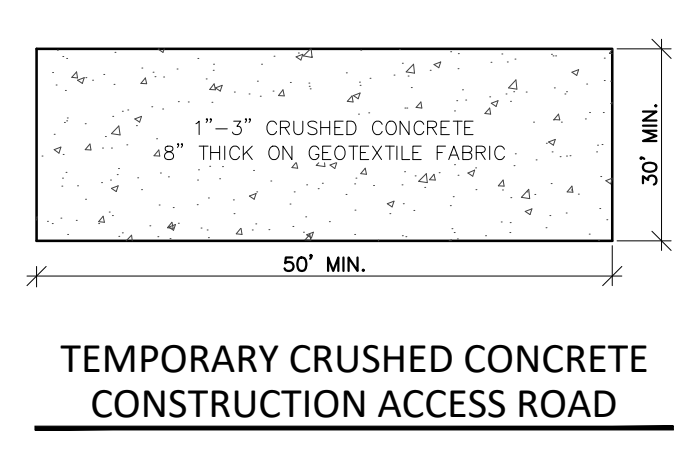
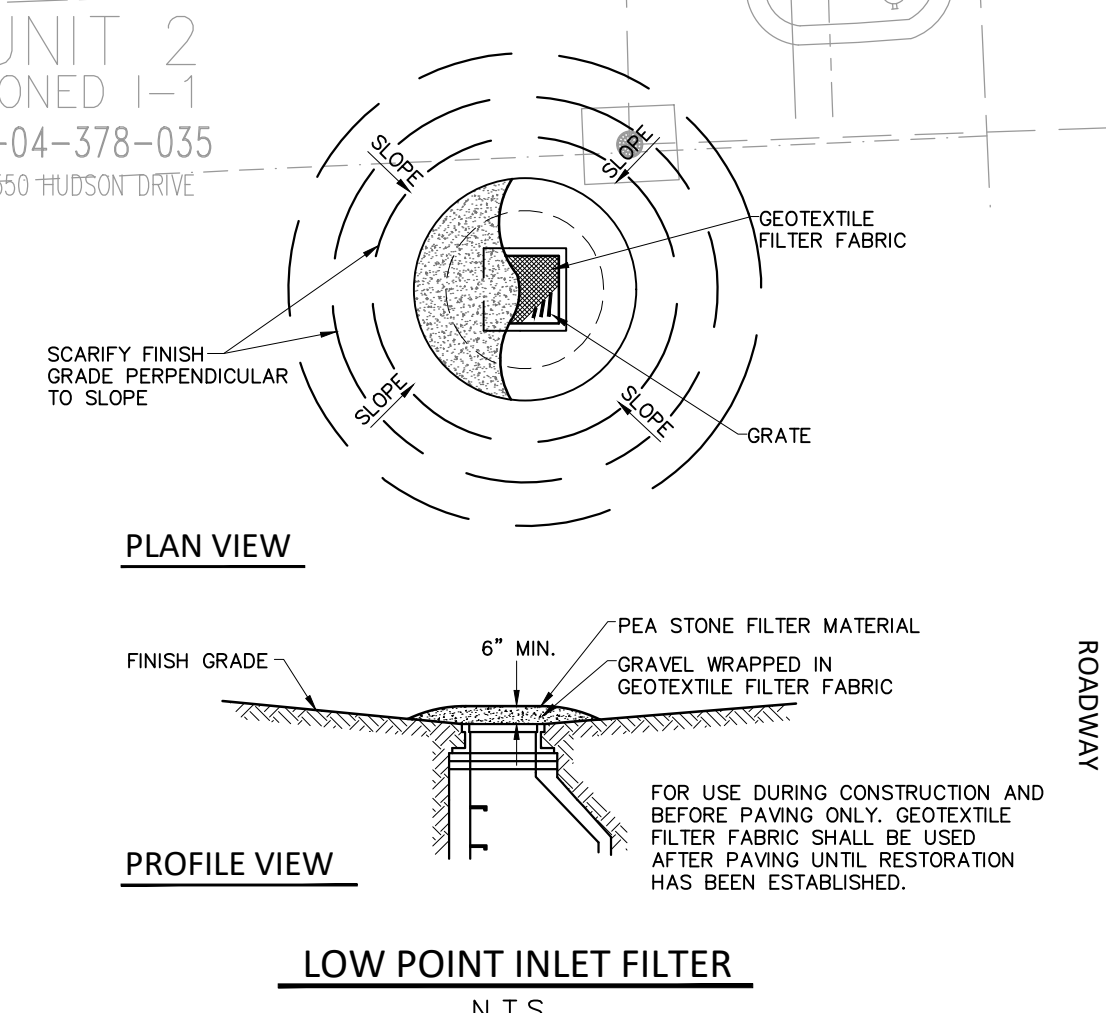
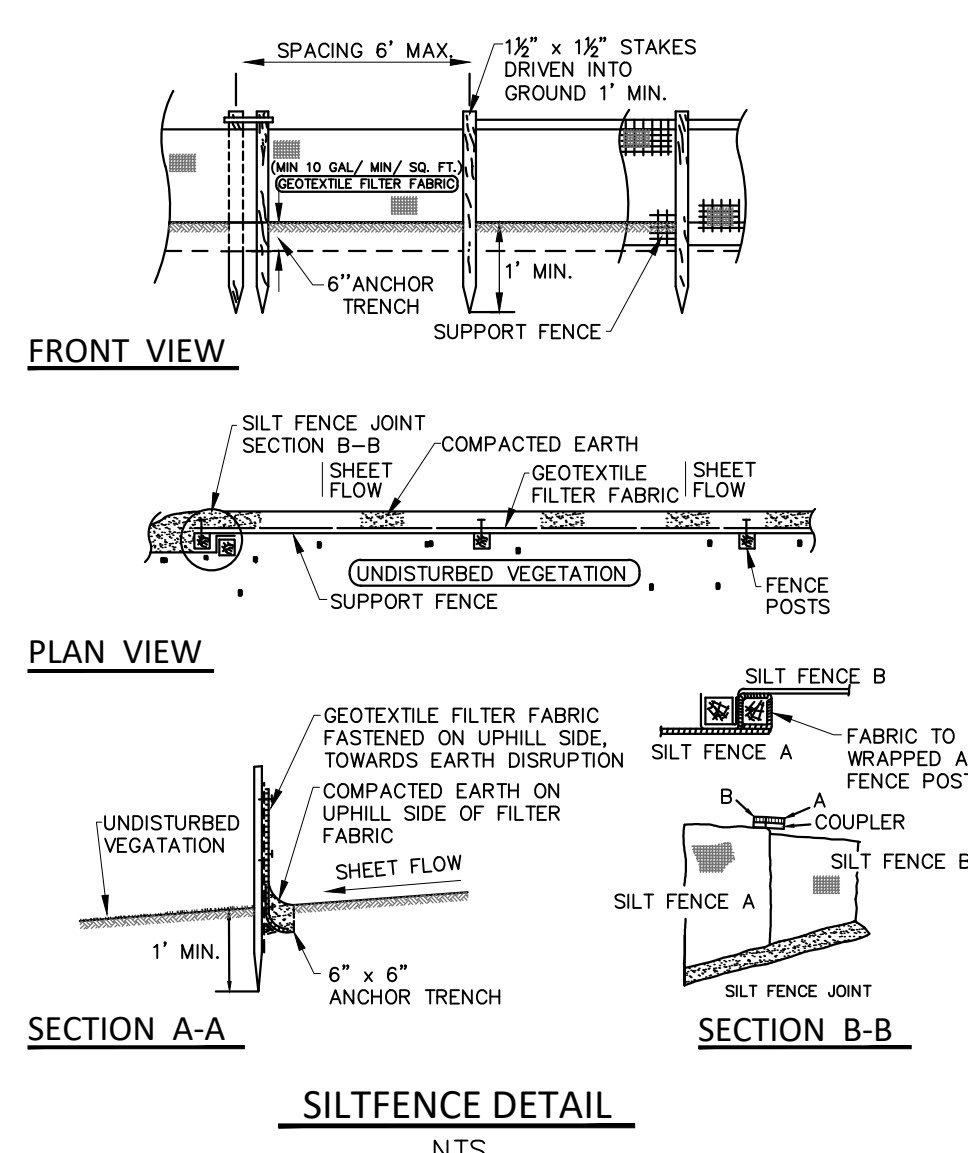
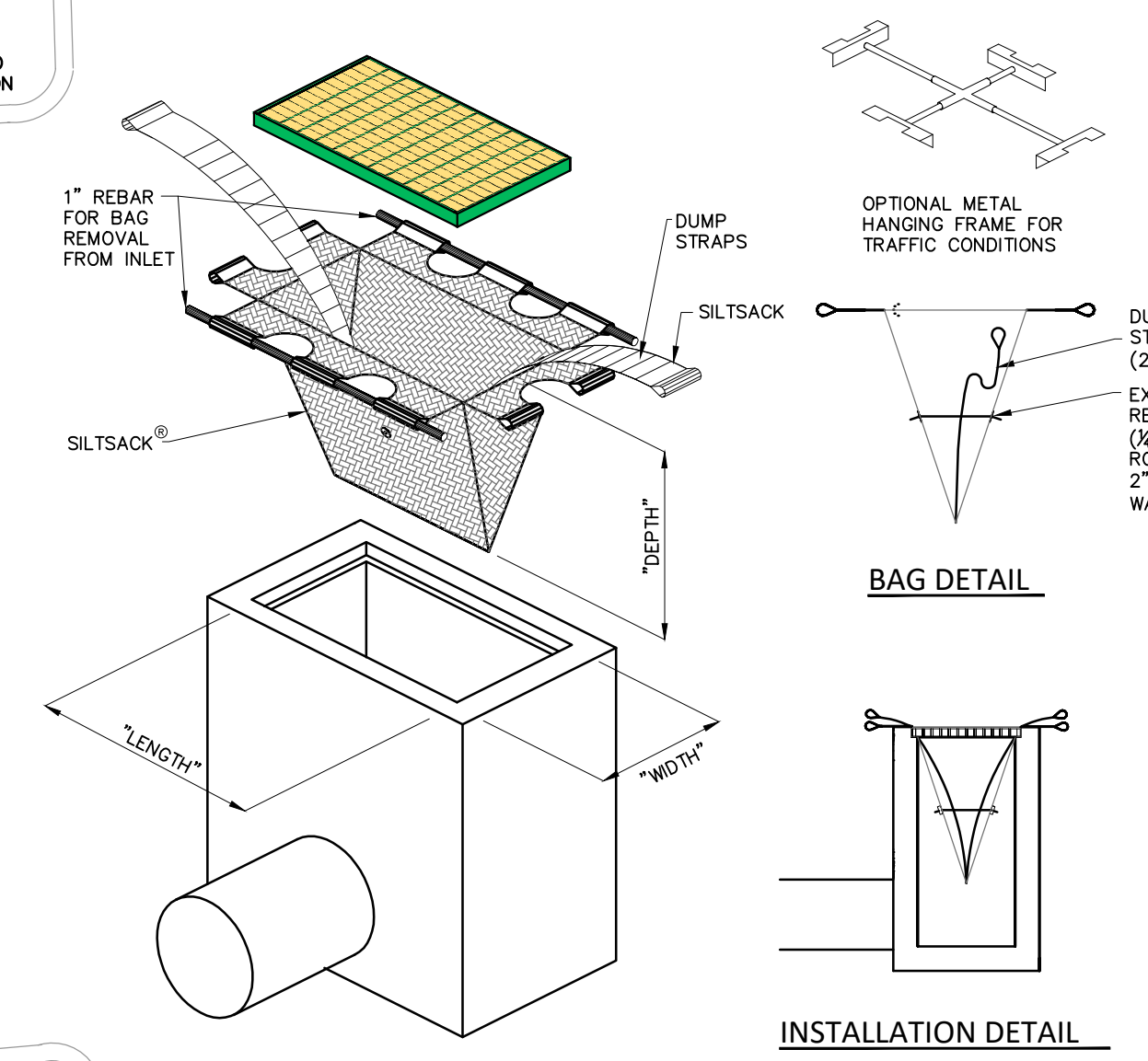
SEED AND MULCH ALL DISTURBED SITE AREAS AND INSTALLED SITE LANDSCAPING.

REMOVE CONSTRUCTION DEBRIS AND JET VAC NEWLY INSTALLED STORM SEWER SYSTEM AS REQUIRED BY THE MUNICIPALITY.

REMOVE ALL REMAINING TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE PERMANENT MEASURES ARE ESTABLISHED.

WHENEVER POSSIBLE, THE SITE SHALL BE GRADED TO WITHIN SIX INCHES (6") OF THE PROPOSED FINISH GRADE PRIOR TO INSTALLATION OF UNDERGROUND FACILITIES.

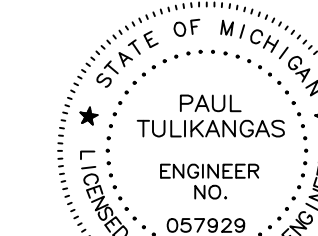
STAGING OF PROPOSED WORK SHALL BE COMPLETED BY THE CONTRACTOR AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED AREAS.



CONSTRUCTION SEQUENCE / TIMING SCHEDULE	
1. INSTALL PERIMETER FILTER FABRIC FENCING AND STONE FILTER WHERE REQUIRED.	APRIL 2023
2. MASS GRADE SITE.	APRIL 2023
3. COMMENCE UNDERGROUND UTILITY WORK.	MAY 2023
4. INSTALL INLET FILTERS ON PROPOSED DRAINAGE STRUCTURES.	JUNE 2023
5. FILL IN SEDIMENTATION TRAPS AND PAVE SITE.	JUNE 2023
6. COMPLETE ALL BUILDINGS AND LANDSCAPE ACTIVITY.	SEPTEMBER 2023
7. JET VAC NEW STORM SEWER SYSTEM AS REQUIRED.	OCTOBER 2023
8. REMOVE ALL TEMPORARY SOIL EROSION MEASURES.	OCTOBER 2023

LEGEND	
	INDICATES LIMITS OF SILT FABRIC FENCE
	INDICATES LIMITS OF DRAINAGE DISTRICT AREA
	INDICATES LIMITS OF SOIL DISRUPTION
	INDICATES LOW POINT INLET FILTER OR PROPOSED DRAINAGE STRUCTURE
	INDICATES SILT SACK OR EQUAL ON EXISTING DRAINAGE STRUCTURE

SEAL



Paul Tulikangas
Professional Engineer

PROJECT
Beek North Unit 5 Industrial
Office Building - 29580
Hudson Drive (JSP 22-54)

CLIENT
CopperRock Construction
601 Fifth Street NW
Suite 300
Grand Rapids, MI 49504
Tel. (616) 570-2382

Contact: Matthew Hall,
Pre-construction Manager

PROJECT LOCATION
Part of the SW 1/4
of Section 4
T.1N., R.8E.,
City of Novi,
Oakland County, Michigan

SHEET
MDOT Sidewalk Ramp
Details (R-28-J)



Know what's below
Call before you dig.

DATE ISSUED/REVISED
01-19-22 ISSUED FOR OWNER REVIEW
02-01-22 ISSUED FOR PRELIM. SITE PLAN REVIEW
03-22-2023 REVISED PER CITY REVIEW

DRAWN BY:
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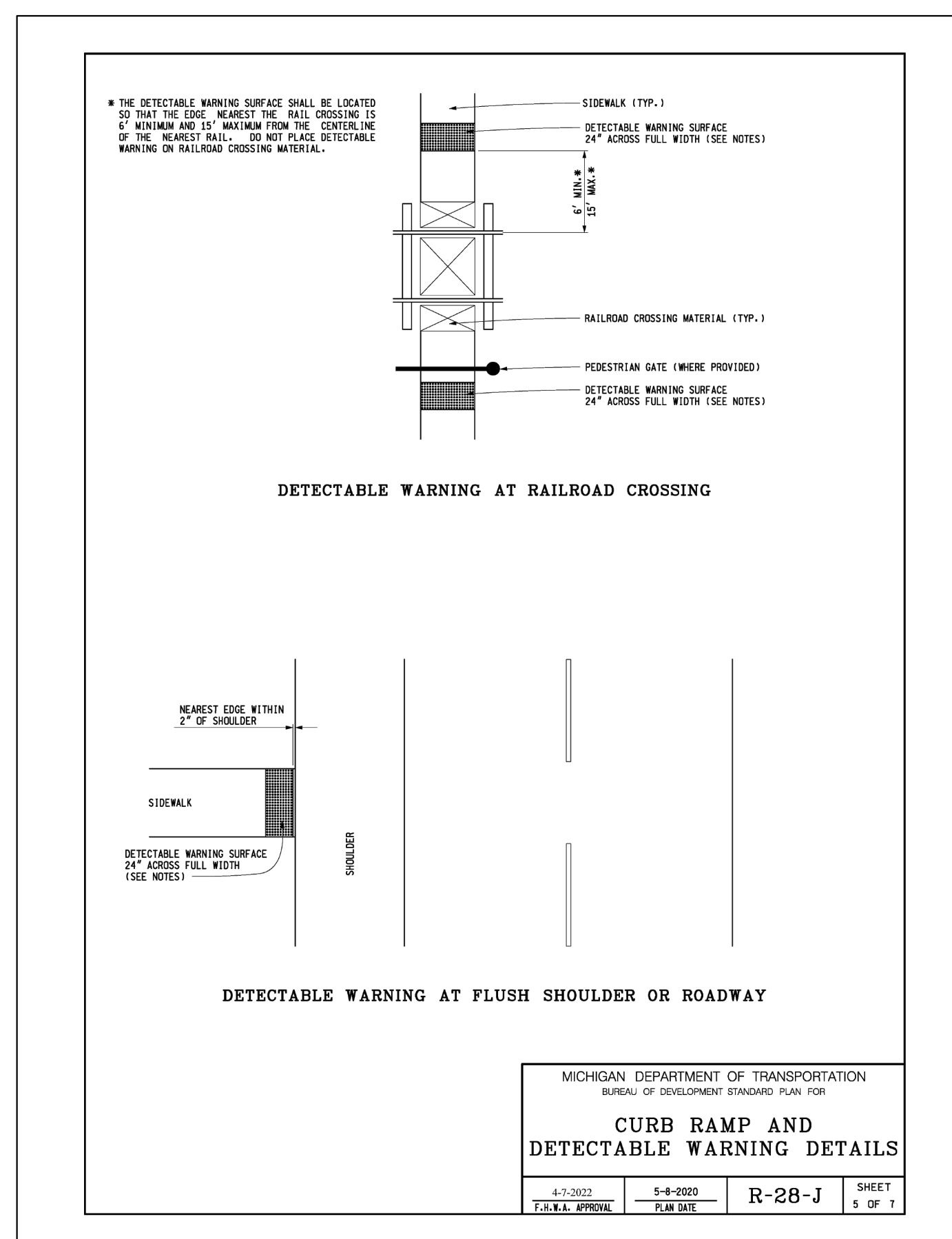
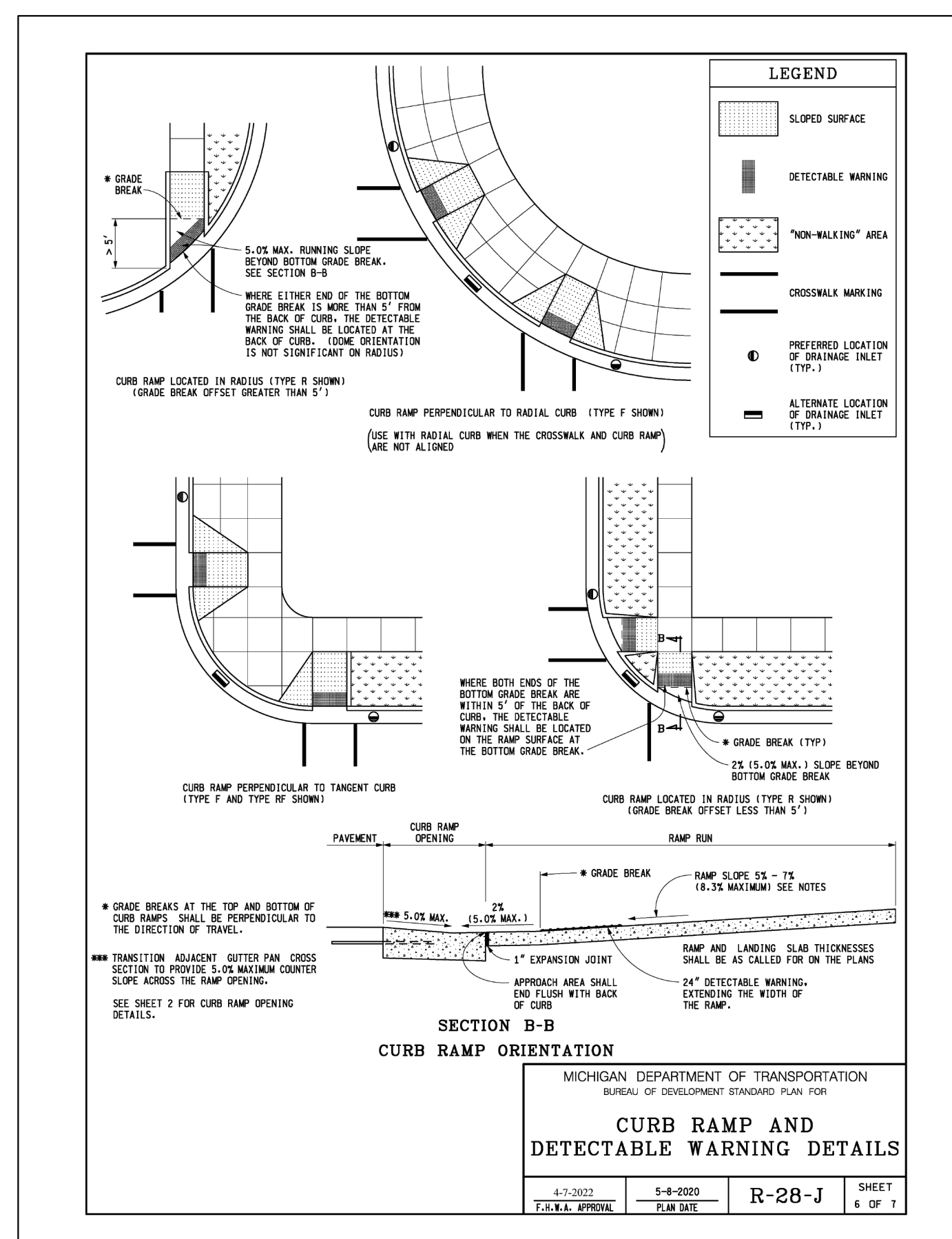
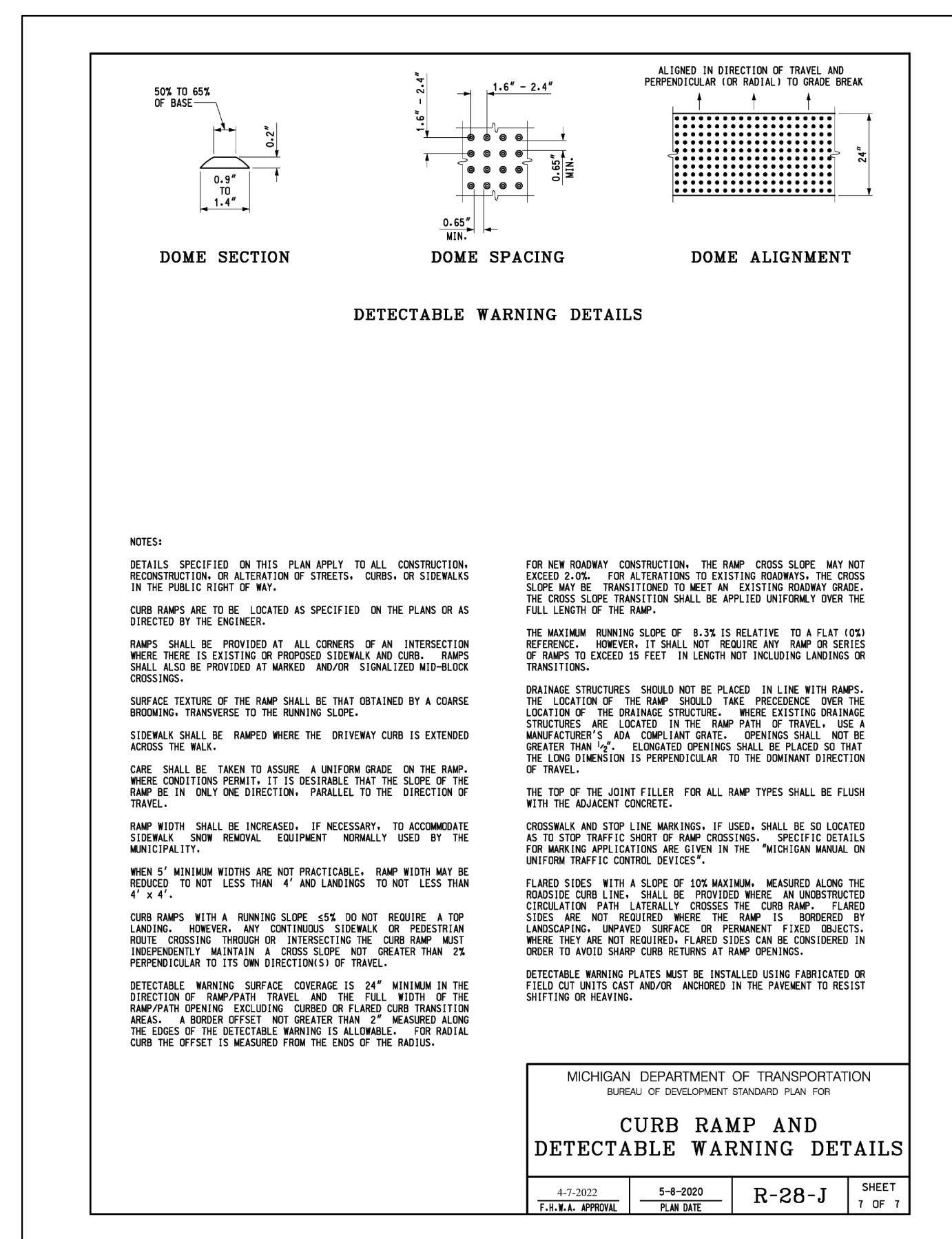
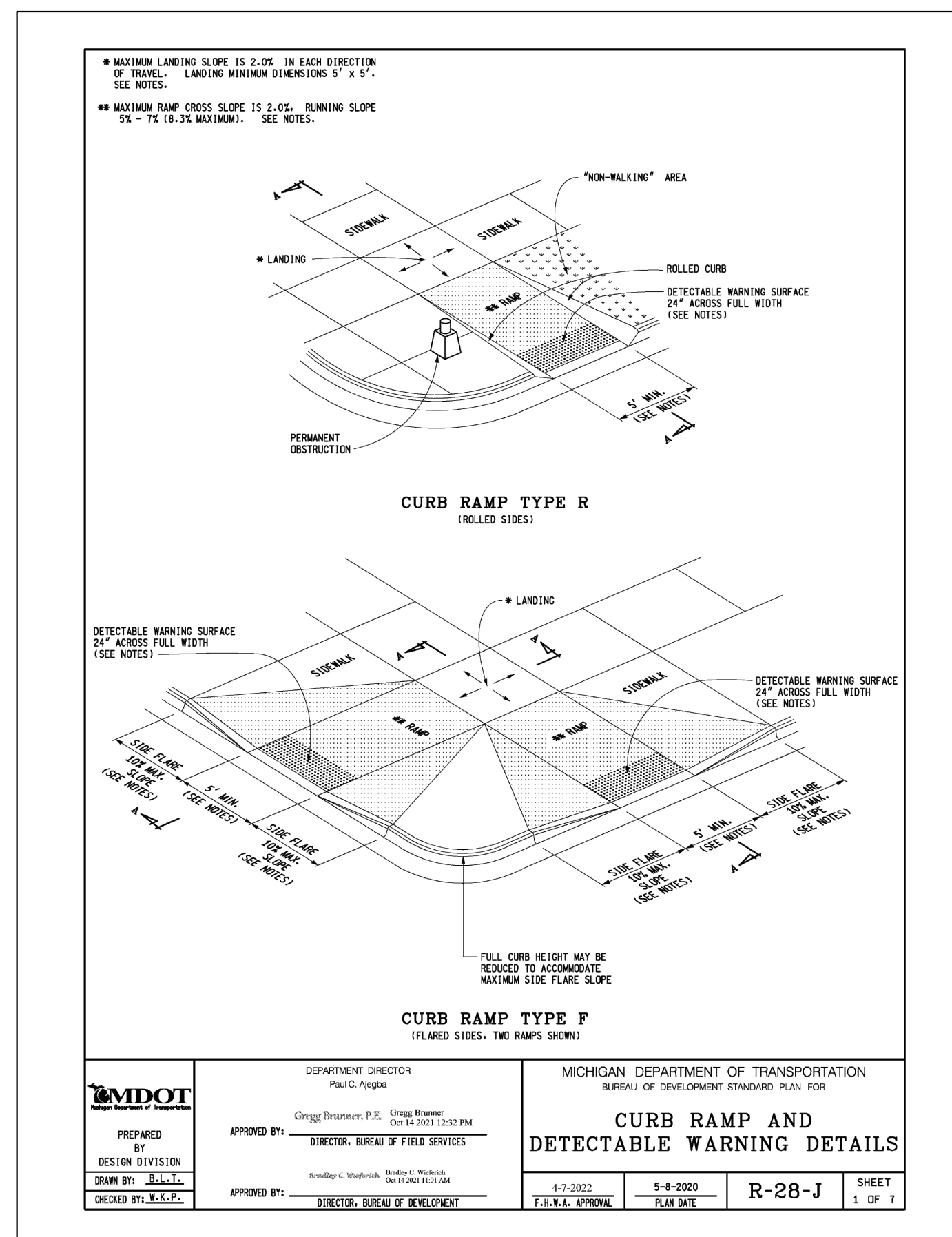
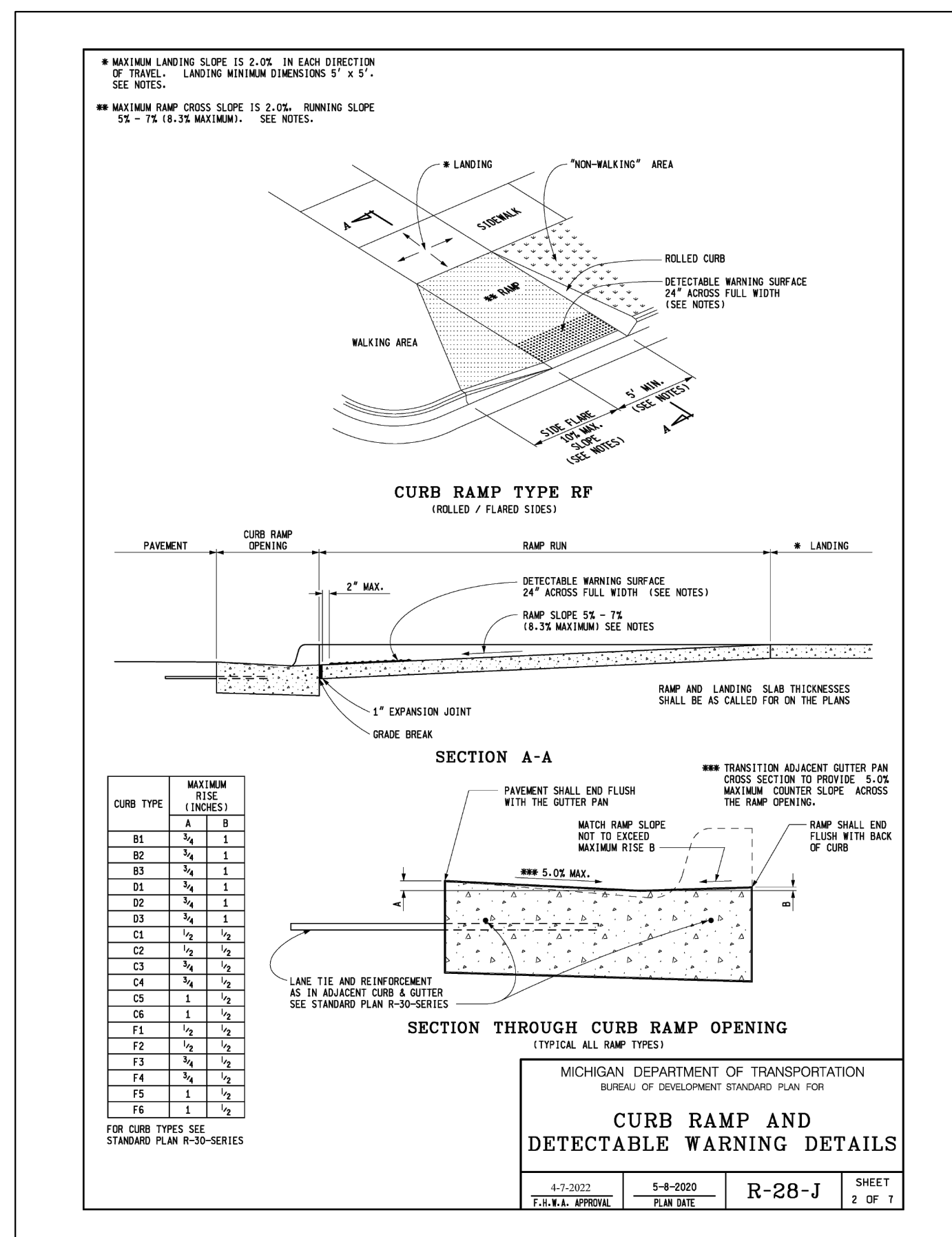
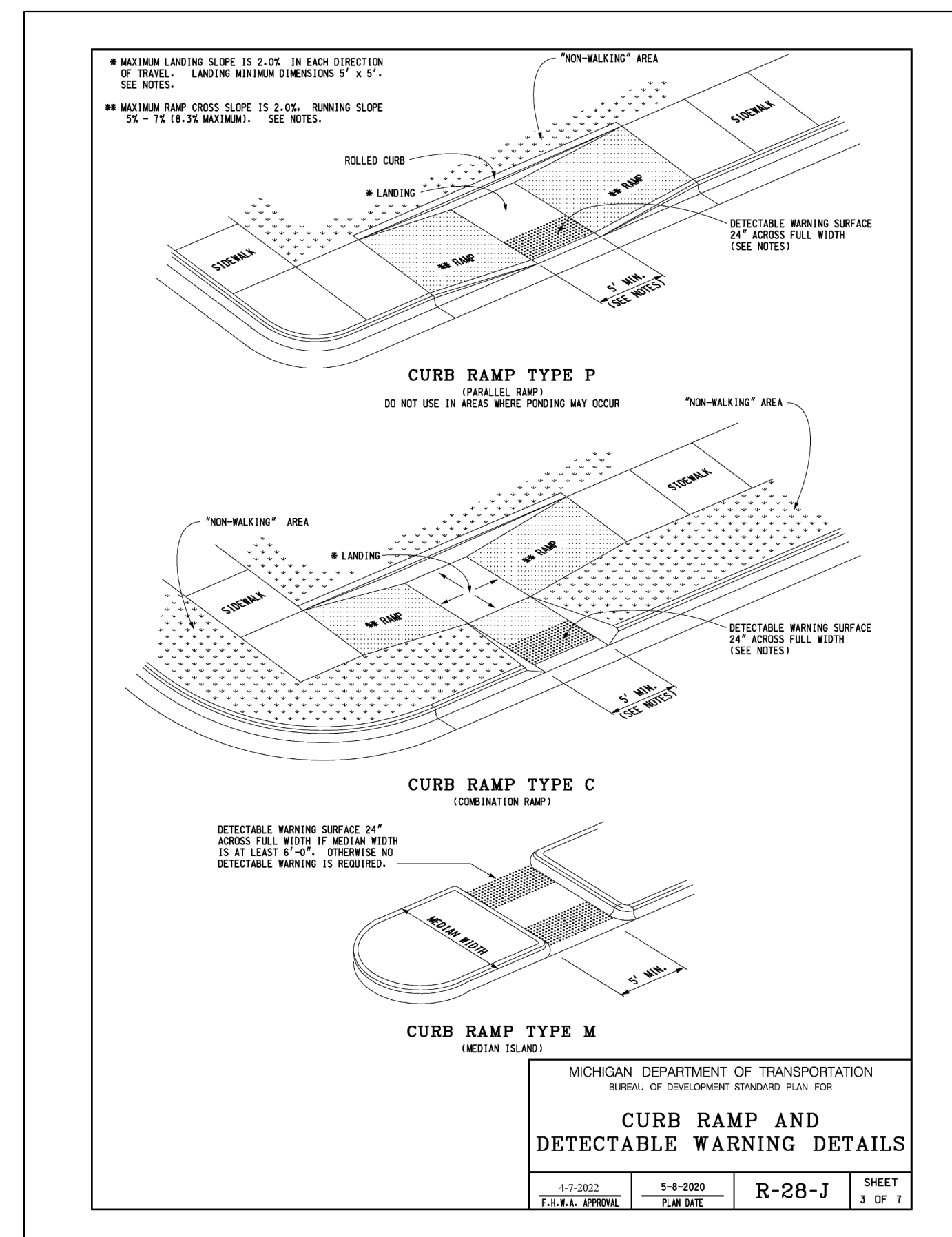
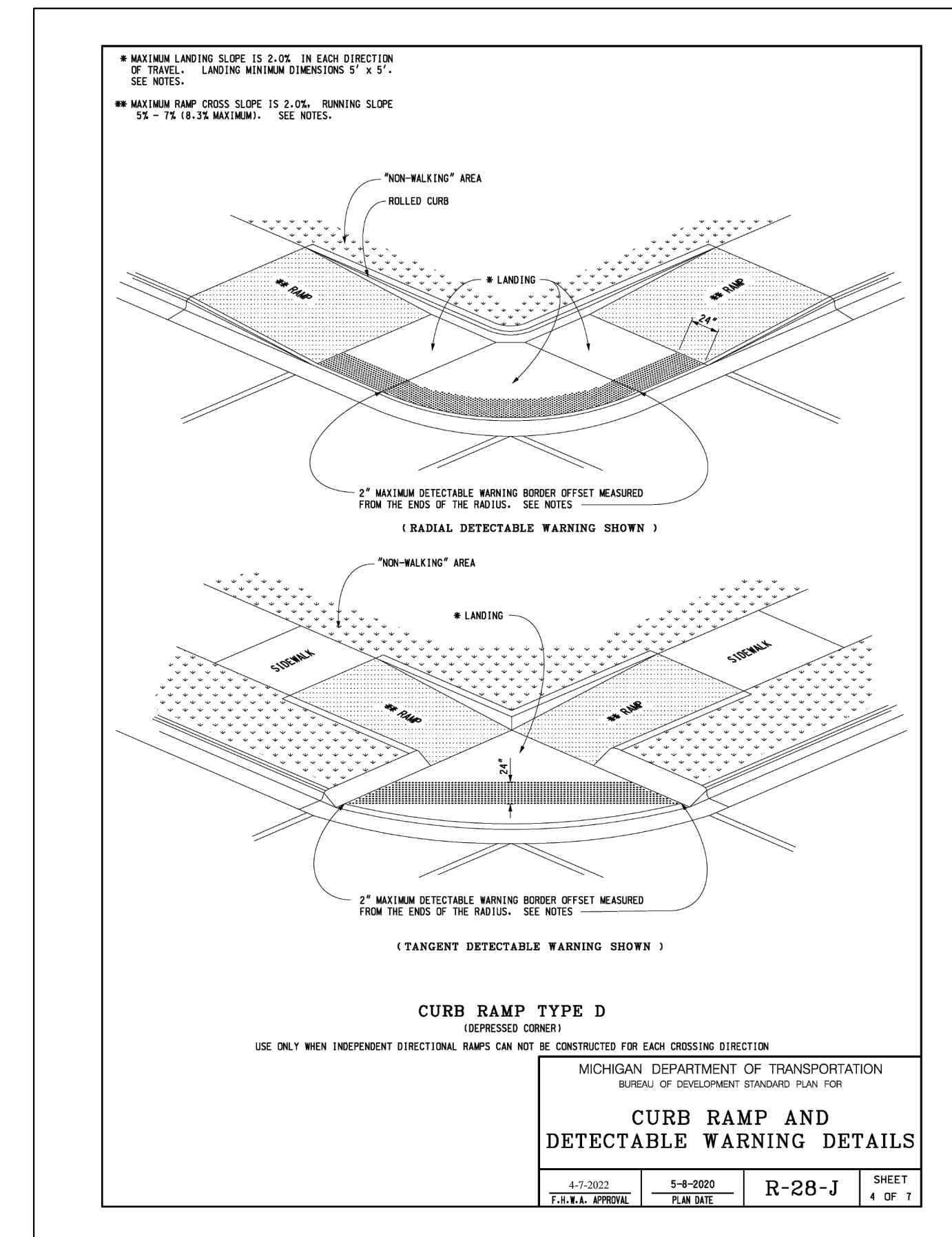
DESIGNED BY:
G. Viju

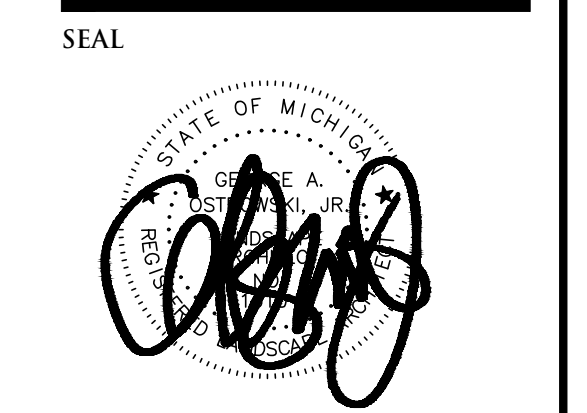
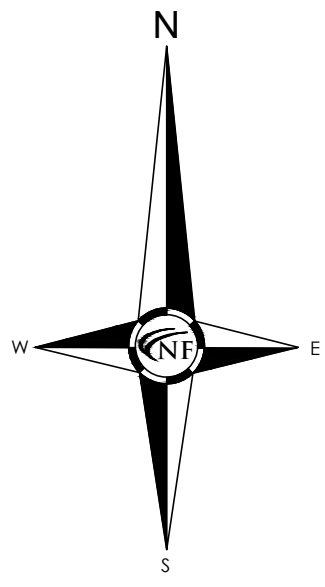
APPROVED BY:
B. Buchholz

DATE:
January 19, 2022

SCALE: N.T.S.

NFE JOB NO. SHEET NO.
N349 **C11**





PROJECT
 Gabriel Group

CLIENT
 CopperRock Construction
 601 Fifth Street NW
 Suite 300
 Grand Rapids, MI 49504
 Tel. (616) 570-2382

Contact: Matthew Hall,
 Pre-construction Manager

PROJECT LOCATION
 Part of the SW 1/4
 of Section 4
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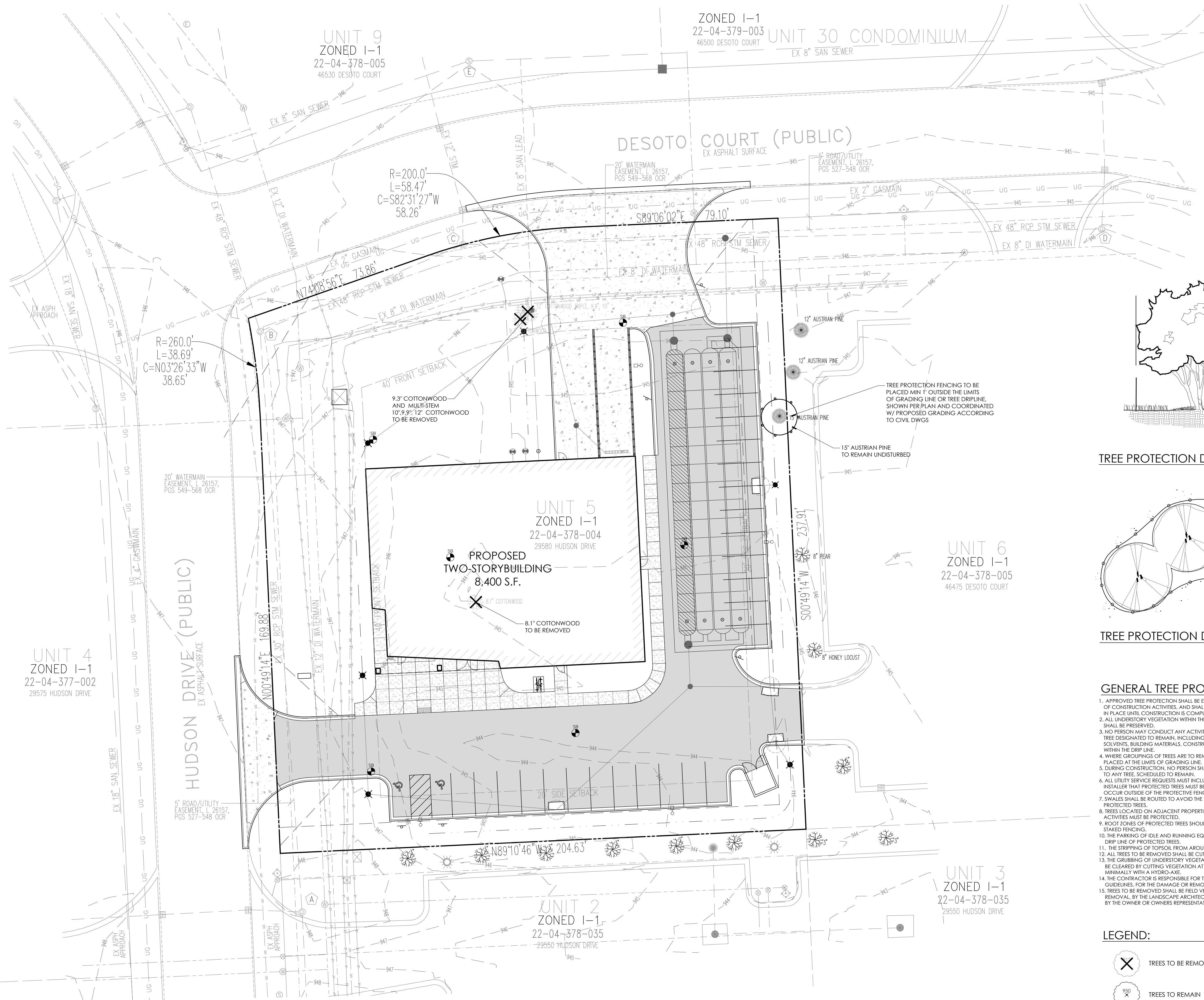
SHEET
 Tree Preservation Plan



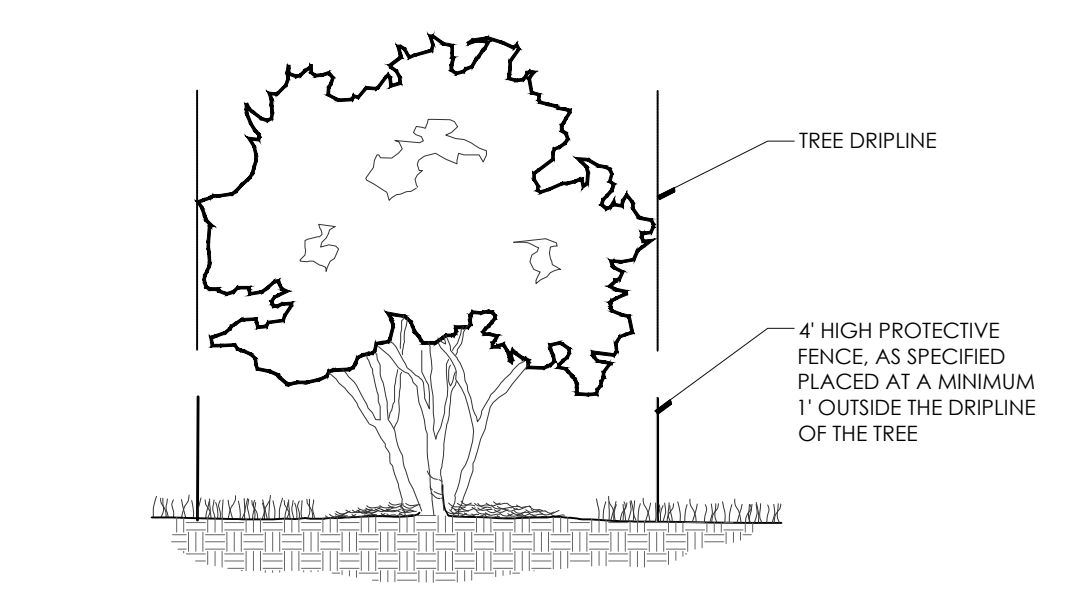
REVISIONS
 01/19/2023 ISSUED FOR OWNER REVIEW
 02/01/2023 ISSUED FOR PSP REVIEW
 03/22/2023 REVISED PER CITY REVIEW

DRAWN BY:
 G. Ostrowski
 DESIGNED BY:
 G. Ostrowski
 APPROVED BY:
 G. Ostrowski
 DATE:
 12-15-2022

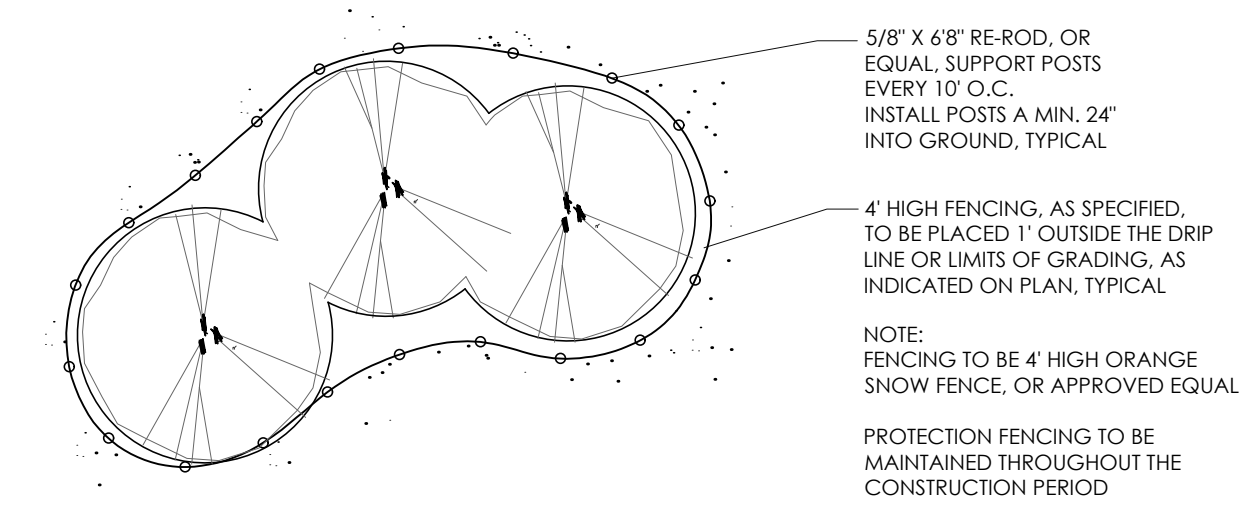
SCALE: 1" = 20'
 NFE JOB NO. SHEET NO.
 N349 L1



INVASIVE SPECIES NOTE:
 A SITE VISIT REVEALED NO JAPANESE KNOTWEED OR
 PHACELITES PRESENT ON-SITE.



TREE PROTECTION DETAIL-SECTION
 NTS



TREE PROTECTION DETAIL-PAN
 NTS

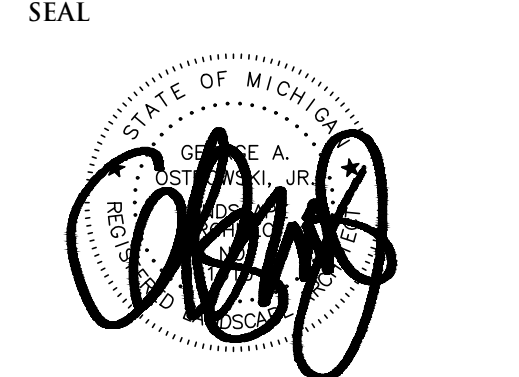
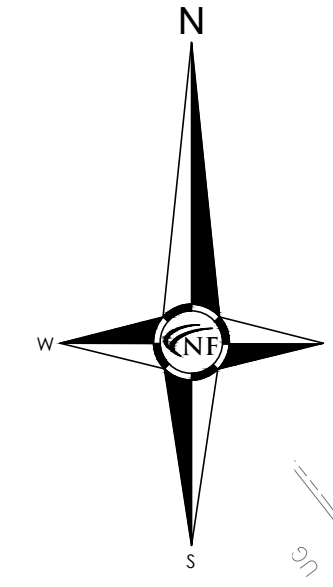
GENERAL TREE PROTECTION NOTES

1. APPROVED TREE PROTECTION SHALL BE ERRECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL THE IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
2. ALL UNDERSTORY VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PRESERVED.
3. NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN THE DRIP LINE.
4. WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE FENCING SHALL BE PLACED AT THE LIMITS OF GRADING LINE.
5. DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY TREE, SCHEDULED TO REMAIN.
6. ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
7. SWALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
8. TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
9. ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED WITH RIGIDLY STAKED FENCING.
10. THE PARKING OF IDLE AND RUNNING EQUIPMENT SHALL BE PROHIBITED UNDER THE DRIP LINE OF PROTECTED TREES.
11. THE STRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED.
12. ALL TREES TO BE REMOVED SHALL BE CUT AWAY FROM TREES TO REMAIN.
13. THE GRUBBING OF UNDERSTORY VEGETATION WITHIN CONSTRUCTION AREAS SHOULD BE CLEARED BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR MINIMALLY WITH A HYDRO-AXE.
14. THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT PER ORDINANCE GUIDELINES FOR THE DAMAGE OR REMOVAL OF ANY TREE DESIGNATED TO REMAIN.
15. TREES TO BE REMOVED SHALL BE FIELD VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL, BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.

LEGEND:

- TREES TO BE REMOVED
- TREES TO REMAIN
- TREE PROTECTION FENCING

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PROJECT
Gabriel Group

CLIENT
CopperRock Construction
601 Fifth Street NW
Suite 300
Grand Rapids, MI 49504
Tel. (616) 570-2382

Contact: Matthew Hall,
Pre-construction Manager

PROJECT LOCATION
Part of the SW ¼
of Section 4
T.1N., R.8E.,
City of Novi,
Oakland County, Michigan

SHEET
Landscape Plan



Know what's below
Call before you dig.

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GENERAL LANDSCAPE NOTES

- LANDSCAPE CONTRACTOR SHALL VERIFY SITE, EXISTING CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND LIST, THE PLAN SHALL GOVERN UNLESS OTHERWISE NOTED BY THE LANDSCAPE ARCHITECT WITH ANY CONCERN.
- THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON-SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ANY DAMAGE OR INTERFERENCE OF UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES, AND SHALL REPAIR ANY UNACCEPTABLE SITE CONDITIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT.
- PLANTS SHALL BE FULLY WELL-BRANCHED, AND IN HEALTHY VIGOROUS GROWING CONDITION.
- PLANTS SHALL BE WATERED BEFORE AND AFTER PLANTING IS COMPLETE. ALL TREES MUST BE STAKED, FERTILIZED AND MULCHED AND SHALL BE GUARANTEED TO EXHIBIT A NORMAL GROWTH CYCLE FOR AT LEAST ONE (1) YEAR FOLLOWING PLANTING.
- ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED IN THE MOST RECENT EDITION OF THE AMERICAN STANDARDS FOR HURD'S STOCK.
- CONTRACTOR WILL SUPPLY FINISHED GRADE AND EXCAVATE AS NECESSARY TO SUPPLY PLANT HOLE MATERIAL FLOODED ON SITE. SOIL SHALL BE SCREENED AND FREE OF DEBRIS, FOREIGN MATERIAL AND STONE.
- SLOW RELEASE FERTILIZER SHALL BE ADDED TO THE PLANT HOLE BEFORE BEING BACKFILLED. APPLICATION SHALL BE AT THE MANUFACTURER'S RECOMMENDED RATE.
- MIXED PLANT MIX (PREPARED TOPSOIL) SHALL CONSIST OF 1/3 SCREENED TOPSOIL, 1/3 SAND, AND 2/3 SHURVOOD COMPOST. MULCH WILL BE SPREAD TO A DEPTH AS INDICATED IN PLANTING DETAILS.
- ALL PLANTINGS SHALL BE MULCHED WITH SHREDED HARDWOOD BARK, SPREAD TO A DEPTH OF 2" FOR TREES AND SHRUBS, AND 2" ON ANNUALS, PERENNIALS, AND GROUNDCOVER PLANTINGS. MULCH SHALL BE FREE FROM DEBRIS AND FOREIGN MATERIAL, AND PRICES ON INCONSISTENT SIZE.
- NO SUBSTITUTIONS OR CHANGES OF LOCATION, OR ANY TYPE SHALL BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
- THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE PLAN AND FIELD CONDITIONS PRIOR TO INSTALLATION.
- THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLANS AND/OR SPECIFICATIONS.
- THE LANDSCAPE CONTRACTOR SHALL SEED AND MULCH OR SOIL (AS INDICATED ON PLANS) ALL AREAS DESIGNATED AS SUCH ON THE PLANS, THROUGHOUT THE CONTRACT LIMITS. FURTHER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING AREAS DISTURBED DURING CONSTRUCTION, NOT IN THE CONTRACT LIMITS, TO EQUAL OR GREATER CONDITION.
- ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESSIVE WATER FROM POOLING ON LAWN AREAS OR AROUND TREES AND SHRUBS.
- ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND SYSTEM.

LANDSCAPE REQUIREMENTS

EXISTING SITE ZONING: I-1, INDUSTRIAL DISTRICT
EXISTING SITE AREA: 47,319.63 S.F. OR 1.09 ACRES

NON-RESIDENTIAL SUBDIVISION LANDSCAPING
1 DECIDUOUS OR EVERGREEN TREE PER 35 L.F. OF FRONTAGE
1 SHRUB PER 20 L.F. OF FRONTAGE
MASSING OR PERENNIALS AND GRASSES AT 10% OF FRONTAGE
HUDSON DRIVE: 208.57 - 25 L.F. = 183.57 L.F.
REQUIRED: 183.57 L.F. / 35 L.F. = 5.24 OR 5 CANOPY TREES REQUIRED
183.57 L.F. / 20 L.F. = 9.18 OR 9 SHRUBS REQUIRED
183.57 L.F. / 10% = 18.36 OR 18 L.F. OF GRASS AND PERENNIAL MASSING PROVIDED: 5 CANOPY TREES, 5 SUB-CANOPY TREES, 1 STREET TREE, 12 SHRUBS, 20 L.F. OF PERENNIAL AND GRASS MASSING

DESO TO COURT: 211.41-55 L.F. = 156.43 L.F.
REQUIRED: 156.43 L.F. / 35 L.F. = 4.47 OR 4 CANOPY TREES REQUIRED
156.43 L.F. / 20 L.F. = 7.82 OR 8 SHRUBS REQUIRED
156.43 L.F. / 10% = 15.64 OR 16 L.F. OF GRASS AND PERENNIAL MASSING PROVIDED: 4 CANOPY TREES, 4 SUB-CANOPY TREES, 2 STREET TREE, 8 SHRUBS, 20 L.F. OF PERENNIAL AND GRASS MASSING

**PARKING LOT LANDSCAPE REQUIREMENTS (I), (P)
INTERIOR PARKING LOT (I)
6% OF TOTAL VEHICLE USE AREA UP TO 50,000 S.F., THEN 0.5%
VIA: 16,709 S.F. (CALCULATED)
16,709 S.F. X 6% = 1,002.54 S.F. AREA REQUIRED
PROVIDED: 1,450 S.F.
1,002.54 S.F. / 200 S.F. = 5 TREES REQUIRED
PROVIDED: 5 TREES**

**PARKING PERIMETER (P)
1 TREE PER 35 L.F. OF PARKING PERIMETER
323 L.F. / 35 L.F. = 9.23 OR 9 TREES REQUIRED
PROVIDED: 9 TREES**

**ACCESSWAY (P)
1 TREE PER 35 L.F. ON EACH SIDE OF DRIVE
NORTH DRIVE: 85 L.F. / 35 L.F. = 2.4 OR 2 TREES
SOUTH DRIVE: 80 L.F. / 35 L.F. = 2.29 OR 2 TREES**

**INTERIOR BUILDING LANDSCAPE (B)
BUILDING PERIMETER X 8', 60% REQUIRED TO BE LANDSCAPED
REQUIRED:
364.93 L.F. - 42 L.F. = 322.93 X 8' = 2,583 S.F. TOTAL AREA REQUIRED
BLDG FRONTAGE X 60%
HUDSON DRIVE: 80 L.F. X 60% = 48 L.F. REQUIRED
DESO TO COURT: 105 L.F. X 60% = 63 L.F. REQUIRED
PROVIDED:
2,899 S.F. OVERALL
80 L.F. (100% OF HUDSON DR AND 76 L.F. (72% OF DESO TO CT FACADES)**

CITY NOTES:

ALL PLANT SUBSTITUTIONS AND/OR DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN WRITING BY THE CITY OF NOVI PRIOR TO INSTALLATION.

ALL TREE WRAP AND STAKES ARE TO BE REMOVED AFTER THE FIRST WINTER SEASON.

THE APPROXIMATE DATE OF INSTALLATION FOR THE PROPOSED LANDSCAPE WILL BE FALL 2023, WITH COMPLETION BY NOVEMBER 15.

THE SITE WILL BE MAINTAINED BY THE DEVELOPER IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THE CITY OF NOVI ZONING ORDINANCE.

ALL LANDSCAPE MATERIALS WILL BE GUARANTEED FOR A MINIMUM OF TWO (2) YEARS, AND SHALL INCLUDE A MINIMUM ONE CULTIVATION IN JUNE, JULY AND AUGUST FOR THE TWO-YEAR WARRANTY PERIOD.

LANDSCAPE WAIVERS REQUESTED:

- DEFICIENCY OF 3 GREENBELT TREES ALONG HUDSON DRIVE, DUE TO LACK OF SPACE FROM UNDERGROUND UTILITIES.
- DEFICIENCY OF 1 GREENBELT BERM ALONG DESO TO DRIVE, DUE TO LACK OF SPACE FROM UNDERGROUND UTILITIES.

GENERAL NOTES:

ALL PROPOSED PLANT MATERIAL SHALL BE NORTHERN GROWN, NO. 1 GRADE STOCK, INSTALLED IN ACCORDANCE WITH AAN AND CITY OF NOVI STANDARDS.

MISS DIG (1-800-482-7171) SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION OF ALL MATERIALS.

BLDG ADDRESS NOTE:

IT IS ANTICIPATED THAT THE BUILDING ADDRESS WILL BE LOCATED ON A GROUND SIGN. EXACT LOCATION WILL BE SUBMITTED FOR A SEPARATE BUILDING PERMIT. A CLEAR VIEW OF THE ADDRESS WILL BE MAINTAINED FROM ROADWAY.

UTILITY/TREE NOTE:

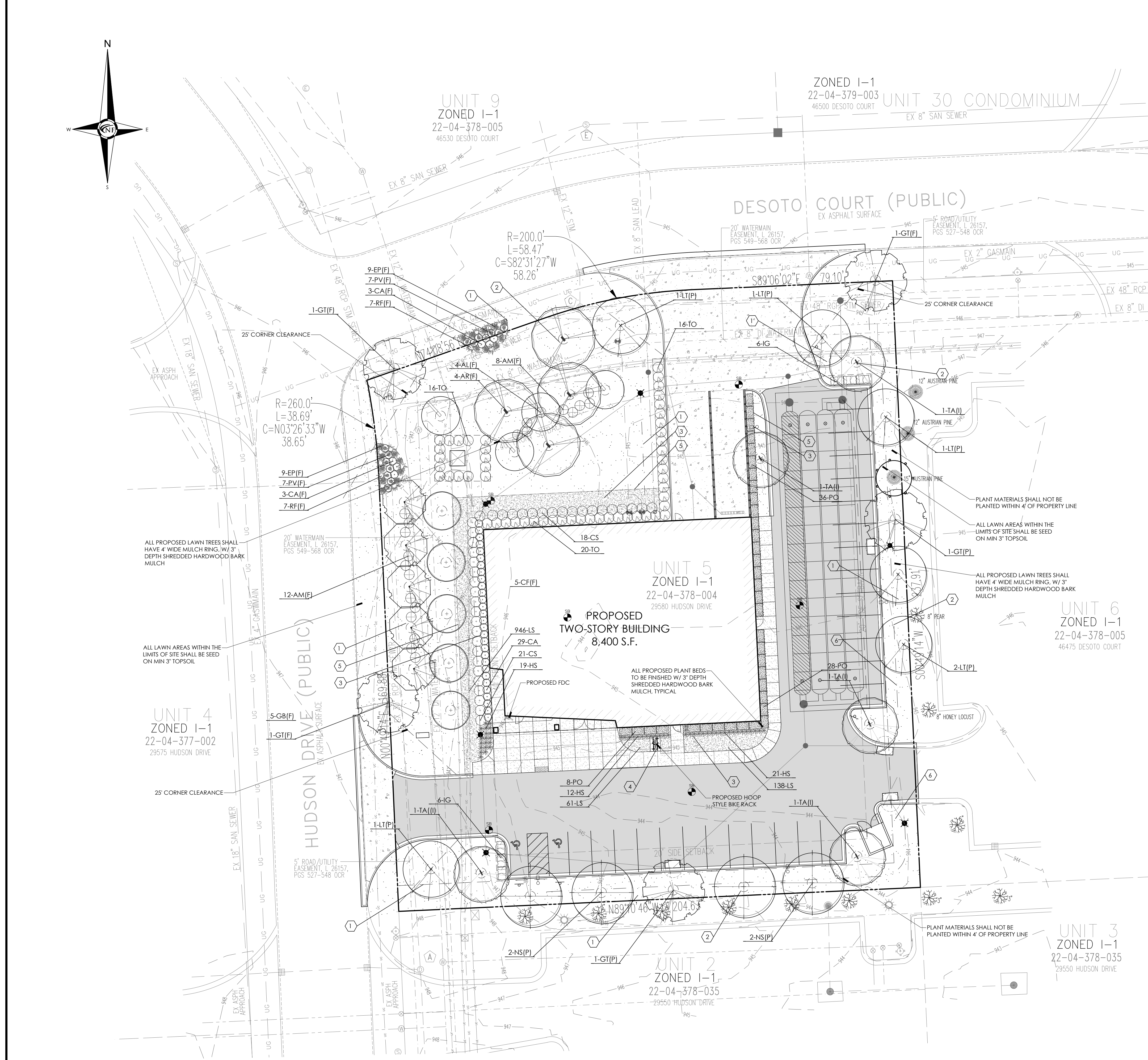
ALL PROPOSED TREES SHALL BE LOCATED 5' FROM AND UNDERGROUND UTILITY LOCATION AND 10' FROM ALL HYDRANTS AND UTILITY STRUCTURES.

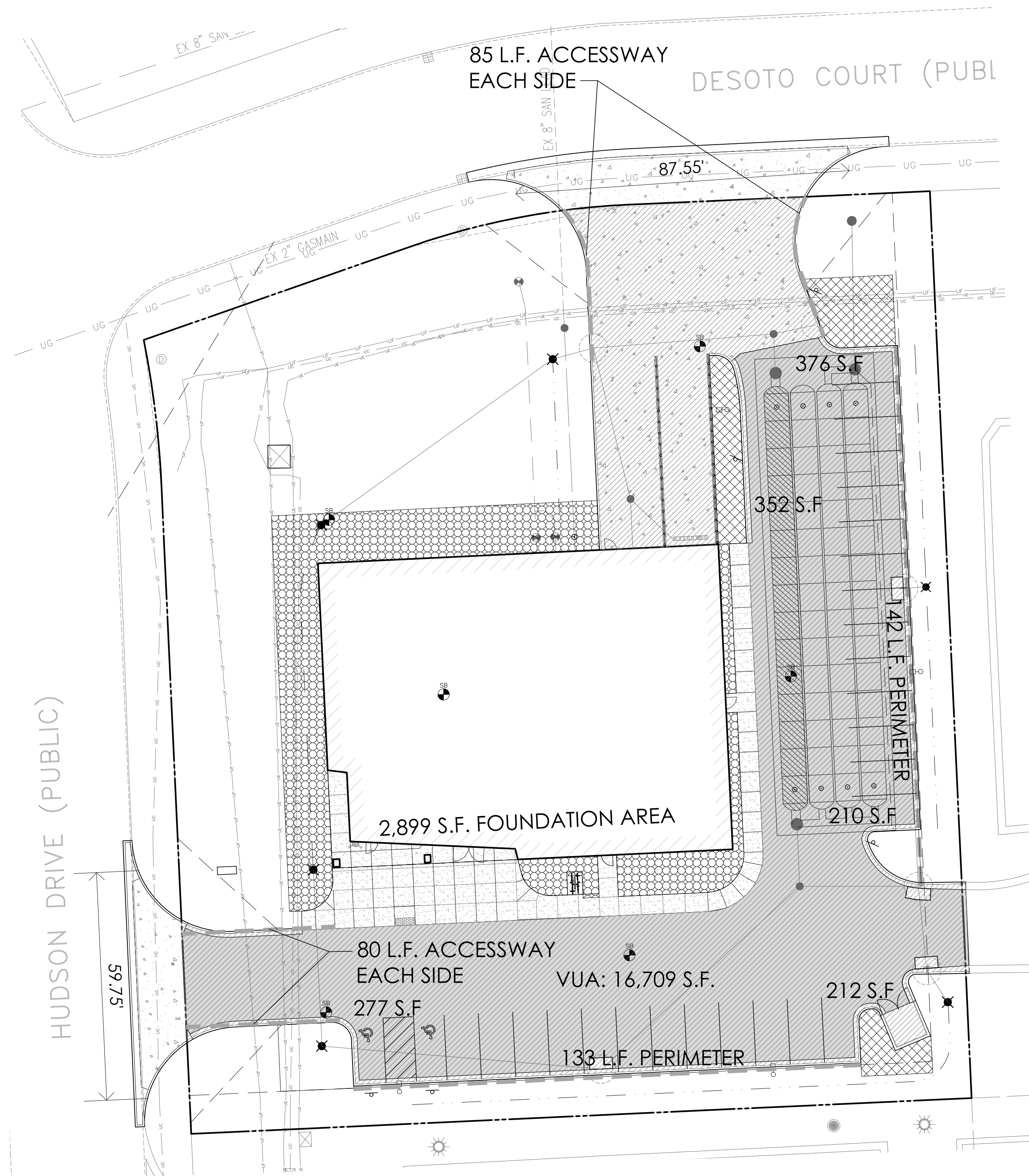
IRRIGATION NOTE:

ALL LANDSCAPE AREAS, INCLUDING THOSE WITHIN THE R.O.W. SHALL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. THE SYSTEM SHALL OPERATE IN COMPLIANCE WITH LOCAL STANDARDS AND SEASONAL RESTRICTIONS. SEPARATE ZONES SHALL BE PROVIDED FOR LAWN AREAS AND PLANTING BEDS. IRRIGATION SHALL BE DESIGNED IN THE MOST EFFICIENT MANNER NECESSARY TO FULLY IRRIGATE ALL PLANTING AREAS.

TYPICAL SEEDING LAWN MIX:
ALL LAWN AREAS DESIGNATED TO BE SEEDING, SHALL BE HYDROSEEDED WITH TYPICAL DROUGHT TOLERANT, DURABLE BLENDED SEED MIX AT A RATE OF 220 LBS PER ACRE
MIX IS COMPRISED OF
30% NITE HAWK PERENNIAL RYE
30% KENTUCKY BLUEGRASS
20% CREEPING RED FESCUE
10% MERIT KENTUCKY BLUEGRASS
10% NEWPORT KENTUCKY BLUEGRASS

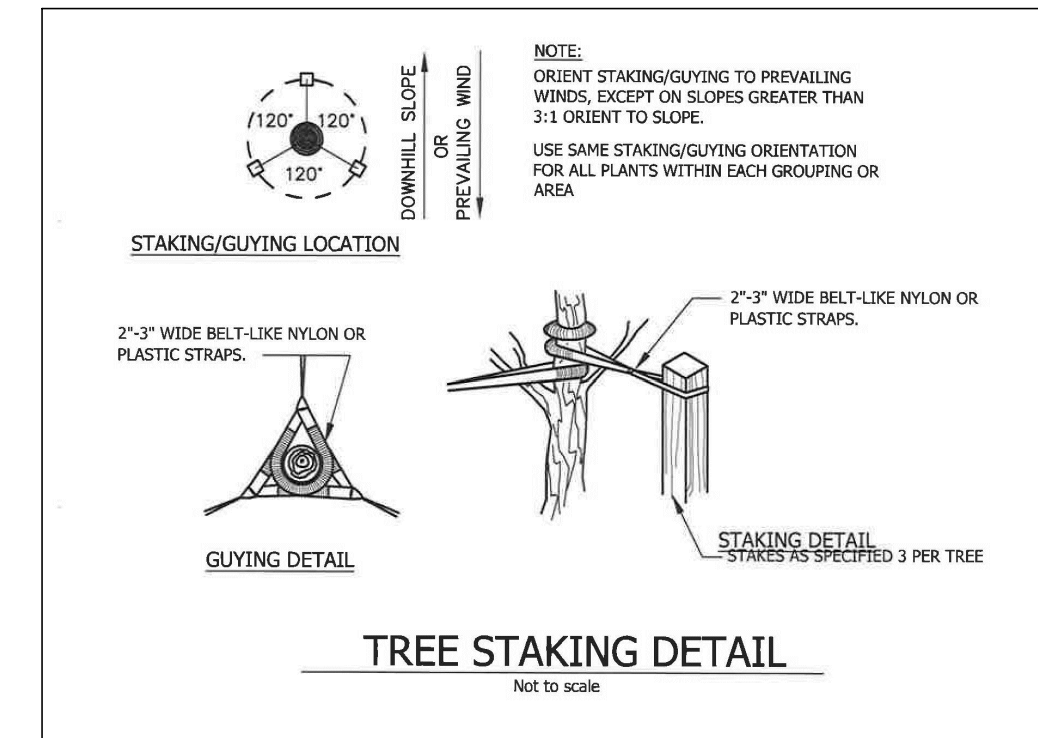
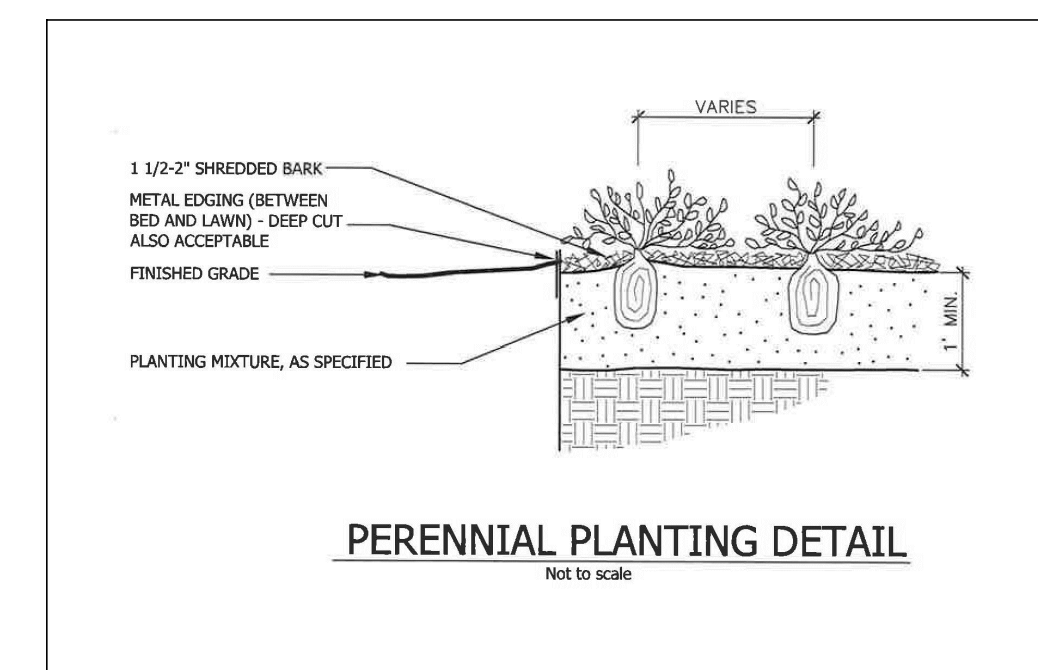
GENERAL SEED NOTE:
ALL LAWN AREAS DESIGNATED TO BE SEEDING, SHALL BE HYDROSEEDED WITH SPECIFIED BLENDS, AND STABILIZED WITH WOOD CELLULOSE FIBER MULCH (2,000 LBS PER ACRE). IN AREAS SUBJECT TO EROSION, SEEDING LAWN SHALL BE FURTHER STABILIZED WHERE NECESSARY WITH BIODEGRADABLE EROSION BLANKET AND STAKED UNTIL ESTABLISHED. ALL SEED SHALL BE APPLIED OVER A MINIMUM 5" PREPARED TOPSOIL, AND SHALL BE KEPT MOIST AND WATERED DAILY UNTIL ESTABLISHED.
SEEDING INSTALLATION SHALL OCCUR ONLY:
SPRING: APRIL TO JUNE
FALL: AUGUST 15 TO OCTOBER 15





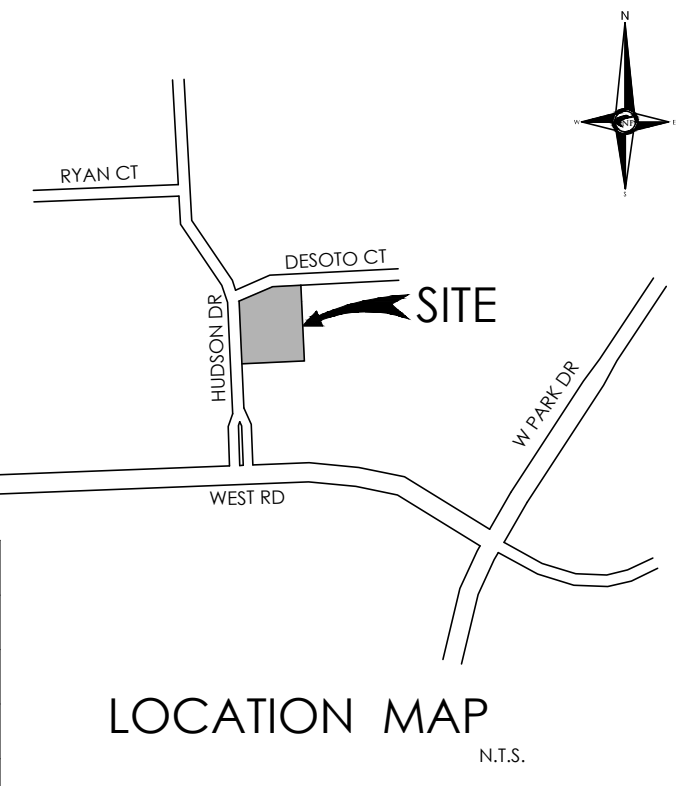
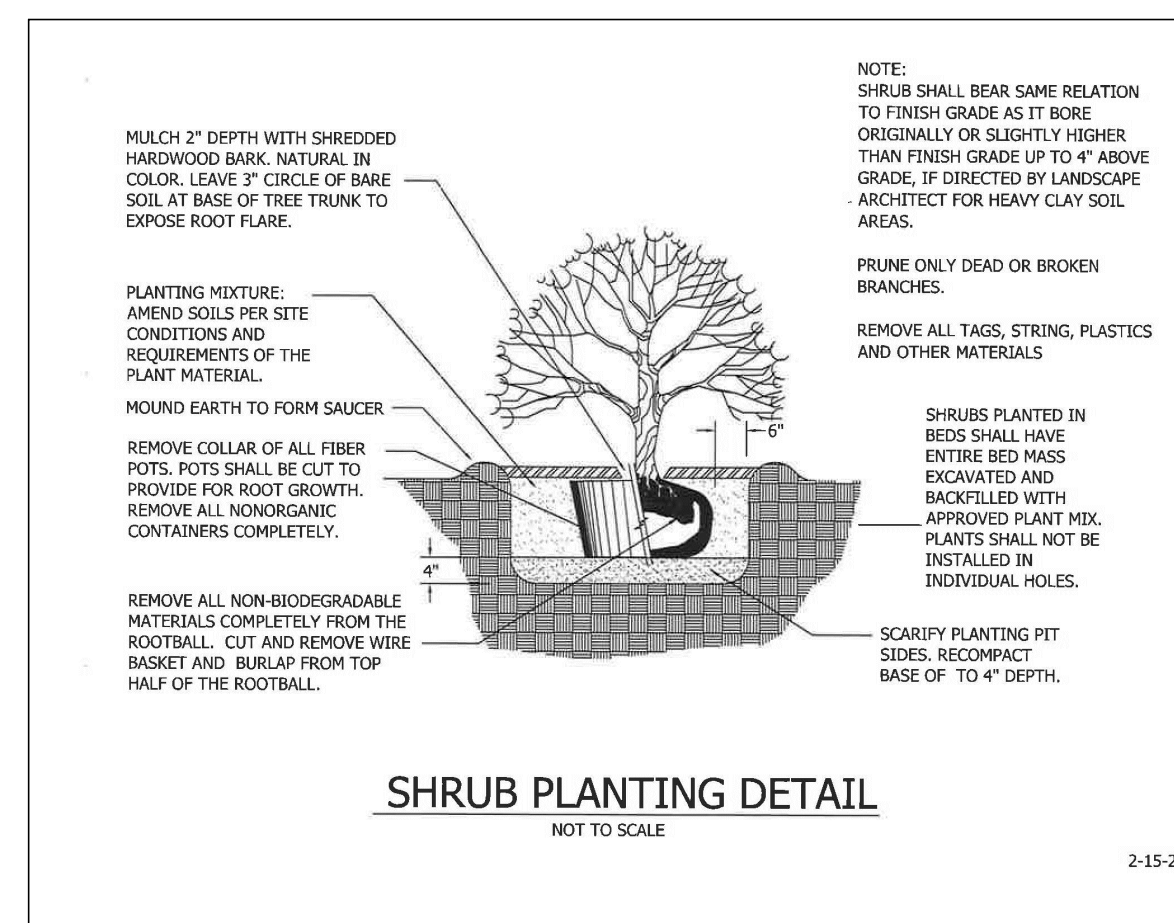
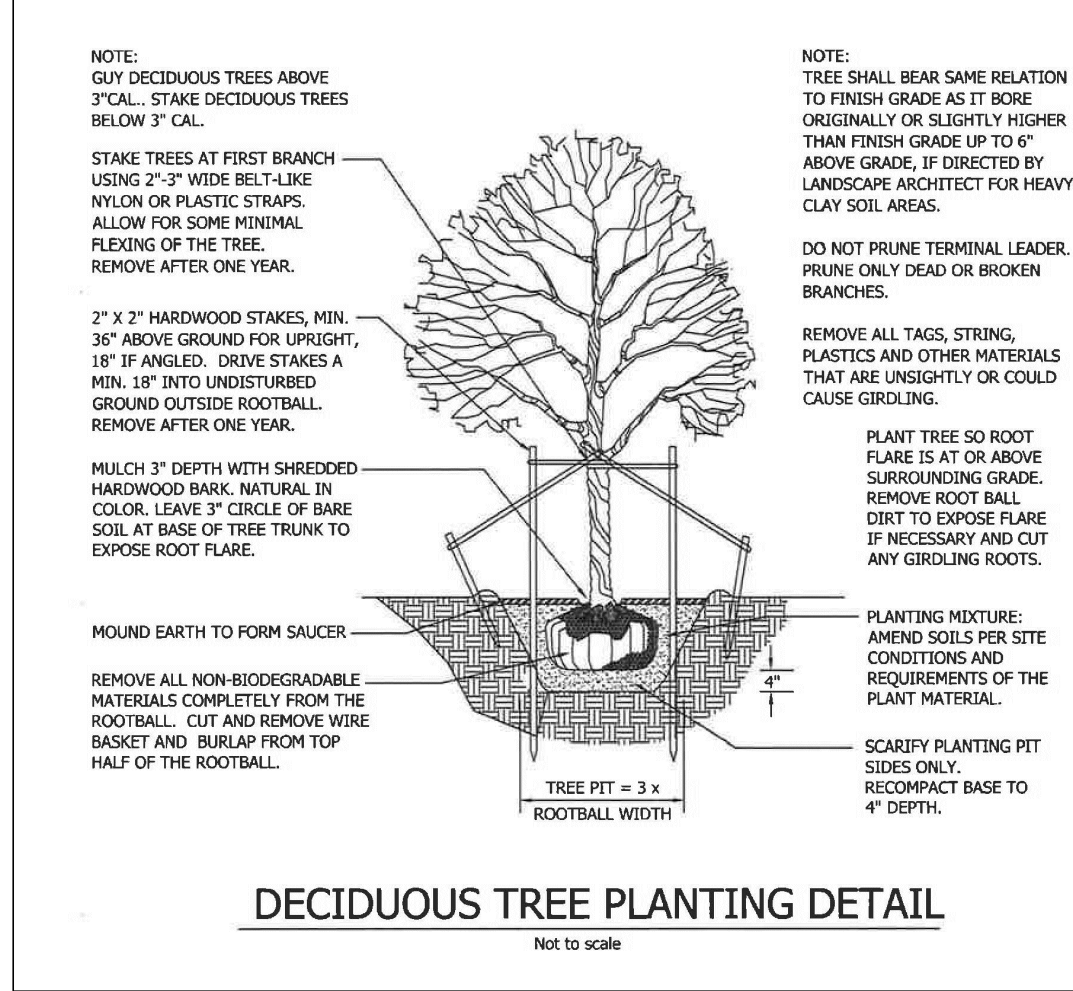
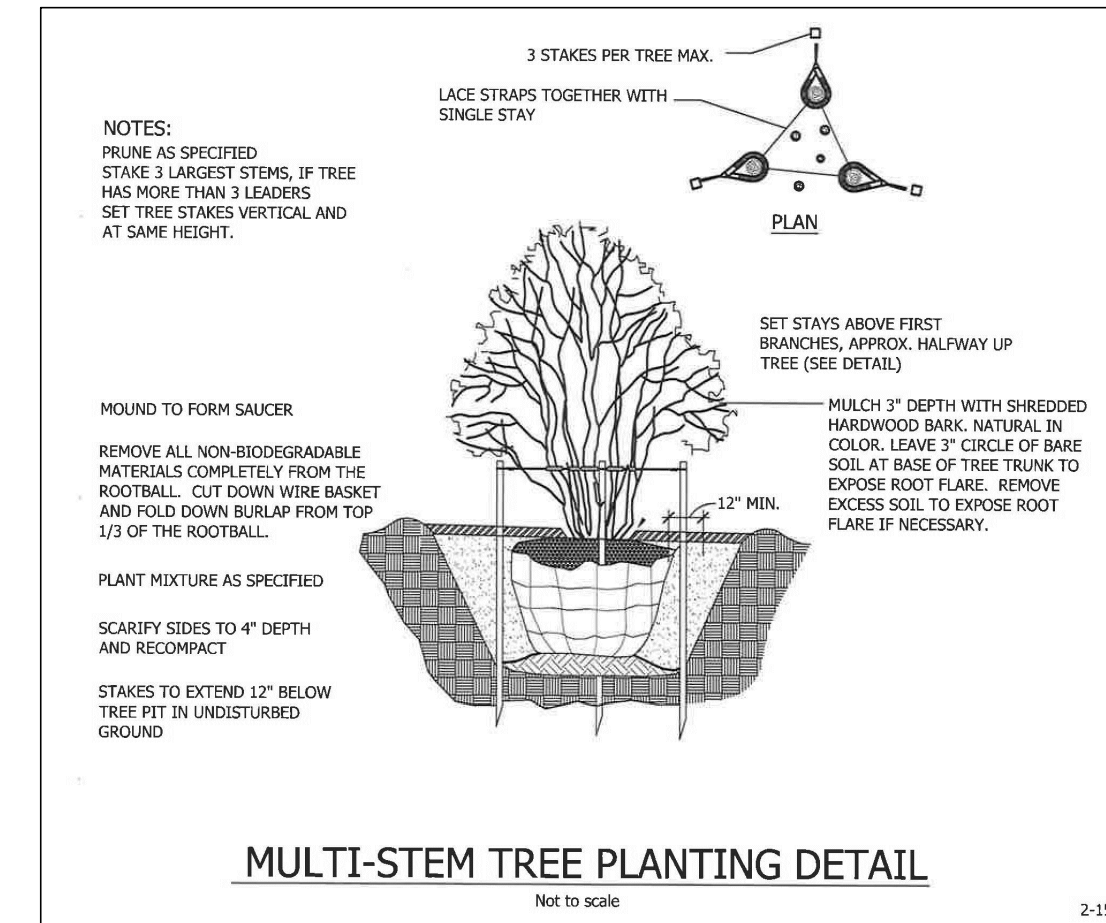
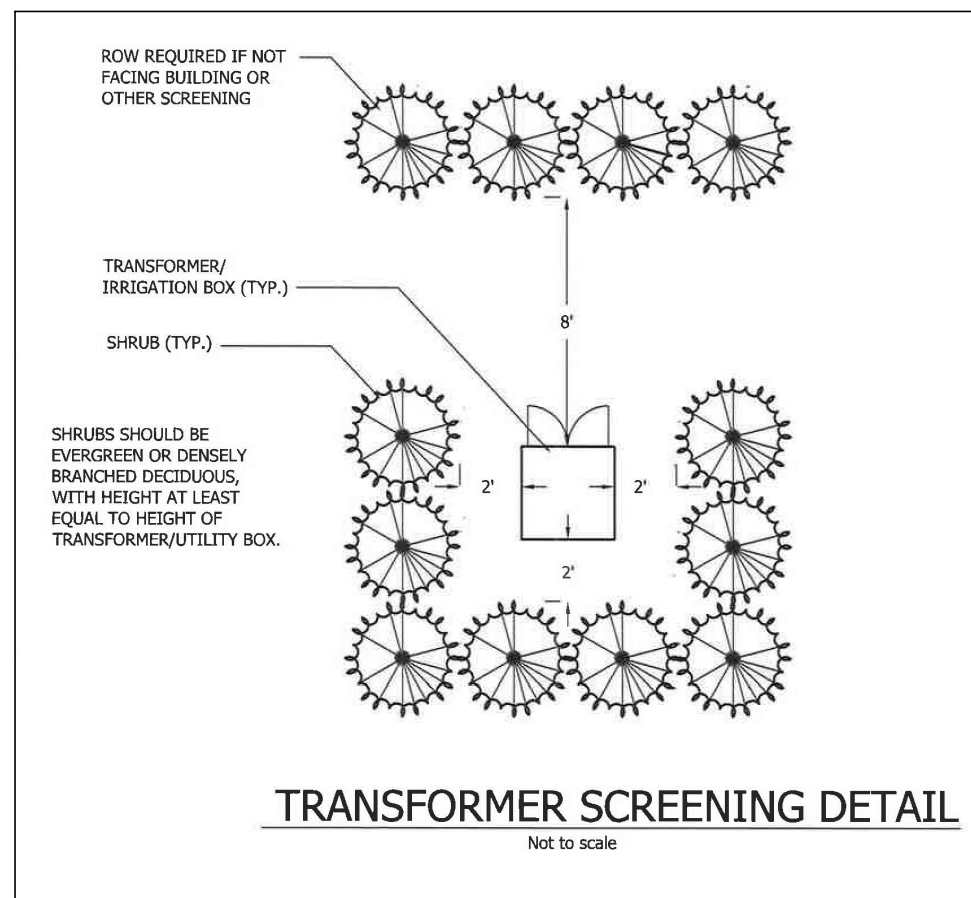
BASIS OF CALCULATION DIAGRAM

NTS



PLANT SCHEDULE

KEY	QTY	BOTANICAL/Common Name	SIZE	SPACING	ROOT	COMMENT	UNIT/TOTAL COST	GENUS/SPECIES %
TREES								
AR	4	Acer rubrum 'Frank Jr.' Redpointe Maple	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$1,600	11%/11%
AL	4	Ameiocyclus laevis Allegheny Serviceberry	6-8' HT	SEE PLAN	B&B	CLUMP FORM, 3 CANES	\$325/\$1,300	11%/11%
CF	5	Cornus florida Flowering Dogwood	2" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$325/\$1,625	13%/13%
GB	5	Cedrela nicothoxy 'Northern Acclaim' Northern Acclaim Honey Locust	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,000	13%/13%
GT	5	Ginkgo biloba 'Magyar' Magyar Ginkgo	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,000	13%/13%
LT	6	Liriodendron tulipifera Tulip Tree	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,400	16%/16%
NS	4	Nyssa sylvatica 'Red Rage' Red Rage Black Tupelo	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$1,600	11%/11%
TA	5	Tilia americana 'Continental Appeal' Continental Appeal Linden	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,000	13%/13%
SHRUBS								
AM	12	Aronia melanocarpa Black Chokeberry	30" HT	30" OC	B&B	WELL-ROOTED	\$50/\$600	
CS	39	Cornus sericea 'Kelseyii' Kelsey Red Twig Dogwood	30" HT	30" OC	B&B	WELL-ROOTED	\$50/\$1,950	
IG	12	Ilex glabra 'Nordic' Nordic Holly	30" HT	30" OC	B&B	WELL-ROOTED	\$50/\$600	
PO	72	Physocarpus opulifolius 'Little Devil' Little Devil Eastern Nanebark	30" HT	3" OC	B&B	WELL-ROOTED	\$50/\$3,600	
TO	52	Thuja occidentalis 'DeGroot's Spire' DeGroot's Spire Arborvitae	6' HT	4" OC	B&B	WELL-ROOTED	\$50/\$2,600	
GROUNDCOVERS/PERENNIALS								
CA	32	Calamagrostis a. 'Karl Foerster' Karl Foerster Feather Reed Grass	3 GAL	30" OC	CONT	WELL-ROOTED	\$15/\$480	
EP	18	Echinacea purpurea 'Pixie Meadowbrite' Pixie Meadowbrite Coneflower	2 GAL	24" OC	CONT	WELL-ROOTED	\$15/\$270	
HS	52	Hemerocallis 'Stella D'Oro' Stella D'Oro Daylily	2 GAL	24" OC	CONT	WELL-ROOTED	\$15/\$780	
LS	1,145	Lilople spicata Creeping Lilyturf	1 GAL	15" OC	CONT	TRIANGULAR SPACING	\$15/\$17,175	
PV	14	Panicum virgatum 'Northwind' Northwind Switch Grass	3 GAL	30" OC	CONT	WELL-ROOTED	\$15/\$210	
RF	18	Rudbeckia fulgida 'Goldsturm' Black-eyed Susan	2 GAL	24" OC	CONT	WELL-ROOTED	\$15/\$270	
MISCELLANEOUS								
SEED	2,229	BLENDED BLUEGRASS SEED MIX	SYD				\$3/\$6,687	
MULCH	38	BLENDED BLUEGRASS SEED MIX	CYD				\$50/\$1,900	
IRR	1	UNDERGROUND IRRIGATION SYSTEM	LS				\$15,000	



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Contact: Matthew Hall,
Pre-construction Manager

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and Details



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