



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:** April 11, 2023

REGARDING: 24305 Haggerty Road, Parcel # 50-22-24-476-022 (PZ23-0008)

BY: Charles Boulard, Director Community Development

I. GENERAL INFORMATION:

Applicant

Nowak & Fraus Engineers

Variance Type

Dimensional Variance

Property Characteristics

Zoning District: This property is zoned General Business (B-3)

Location: west side of Haggerty Road, north of 10 Mile

Parcel #: 50-22-24-476-022

Request

The applicant is requesting a variance from the City of Novi Zoning Ordinance Section 3.10.3.A to allow an overhead door to face a major thoroughfare (Haggerty Road). This property is zoned General Business (B-3)

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. **PZ23-0008**, 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 if 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. **PZ23-0008**, 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 Petitioners 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.
Charles Boulard - Director Community Development - City of Novi



Community Development Department

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 Novi, MI 48375
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 www.cityofnovi.org

**ZONING BOARD OF APPEALS
 APPLICATION**

APPLICATION MUST BE FILLED OUT COMPLETELY

I. PROPERTY INFORMATION (Address of subject ZBA Case)				Application Fee: _____	
PROJECT NAME / SUBDIVISION Lithia Motors, Inc. - Porsche of Novi				Meeting Date: _____	
ADDRESS 24305 Haggerty Road		LOT/SIUTE/SPACE #		ZBA Case #: PZ _____	
SIDWELL # 50-22- 24 - 476 - 022		May be obtained from the Assessing Department (248) 347-0485			
CROSS ROADS OF PROPERTY East Side of Haggerty Road, North of 10 Mile Road					
IS THE PROPERTY WITHIN A HOMEOWNER'S ASSOCIATION JURISDICTION? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			REQUEST IS FOR: <input type="checkbox"/> RESIDENTIAL <input checked="" type="checkbox"/> COMMERCIAL <input type="checkbox"/> VACANT PROPERTY <input type="checkbox"/> SIGNAGE		
DOES YOUR APPEAL RESULT FROM A NOTICE OF VIOLATION OR CITATION ISSUED? <input type="checkbox"/> YES <input type="checkbox"/> NO					
II. APPLICANT INFORMATION					
A. APPLICANT		EMAIL ADDRESS jlonghurst@nfe-engr.com		CELL PHONE NO.	
NAME Jason R. Longhurst, P.E.				TELEPHONE NO. 248-332-7931	
ORGANIZATION/COMPANY Nowak and Fraus Engineers				FAX NO.	
ADDRESS 46777 Woodward Avenue		CITY Pontiac		STATE MI	ZIP CODE 48342
B. PROPERTY OWNER <input type="checkbox"/> CHECK HERE IF APPLICANT IS ALSO THE PROPERTY OWNER					
Identify the person or organization that owns the subject property:		EMAIL ADDRESS		CELL PHONE NO.	
NAME Anne Breck				TELEPHONE NO. 541-734-3043	
ORGANIZATION/COMPANY Lithia Motors, Inc.				FAX NO.	
ADDRESS 150 North Bartlett Street		CITY Medford		STATE OR	ZIP CODE 97501
III. ZONING INFORMATION					
A. ZONING DISTRICT					
<input type="checkbox"/> R-A <input type="checkbox"/> R-1 <input type="checkbox"/> R-2 <input type="checkbox"/> R-3 <input type="checkbox"/> R-4 <input type="checkbox"/> RM-1 <input type="checkbox"/> RM-2 <input type="checkbox"/> MH <input type="checkbox"/> I-1 <input type="checkbox"/> I-2 <input type="checkbox"/> RC <input type="checkbox"/> TC <input type="checkbox"/> TC-1 <input checked="" type="checkbox"/> OTHER B-3 _____					
B. VARIANCE REQUESTED					
INDICATE ORDINANCE SECTION (S) AND VARIANCE REQUESTED:					
1. Section 3.10.3.A _____ Variance requested Overhead doors facing a major thoroughfare _____					
2. Section _____ Variance requested _____					
3. Section _____ Variance requested _____					
4. Section _____ Variance requested _____					
IV. FEES AND DRAWINGS					
A. FEES					
<input type="checkbox"/> Single Family Residential (Existing) \$200 <input type="checkbox"/> (With Violation) \$250 <input type="checkbox"/> Single Family Residential (New) \$250					
<input checked="" type="checkbox"/> Multiple/Commercial/Industrial \$300 <input type="checkbox"/> (With Violation) \$400 <input type="checkbox"/> Signs \$300 <input type="checkbox"/> (With Violation) \$400					
<input type="checkbox"/> House Moves \$300 <input type="checkbox"/> Special Meetings (At discretion of Board) \$600					
B. DRAWINGS 1-COPY & 1 DIGITAL COPY SUBMITTED AS A PDF					
<ul style="list-style-type: none"> • 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 			<ul style="list-style-type: none"> • 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 scheduled 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

Date

2/23/23

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

Date

02/16/2023

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
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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:

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).

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.

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.

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.

Owner

LITHIA MOTORS, INC.
150 N. BARTLETT STREET
MEDFORD, OREGON 97501

CONTACT:
MS. ANNE BRECK
PHONE: (541) 734-3043
EMAIL: ABRECK@LITHIA.COM

Architect

STUDIO DETROIT
2040 PARK AVENUE
SUITE 200
DETROIT, MICHIGAN 48226

CONTACT:
MR. SHANE BURLEY AIA, NCARB
PHONE: (313) 919-5886
EMAIL: SHANE@STUDIO-DETROIT.COM

Civil Engineer

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVENUE
PONTIAC, MICHIGAN 48342
CONTACT:
MR. JASON R. LONGHURST, P.E.
PHONE: (248) 332-7931
EMAIL: JLONGHURST@NFE-ENGR.COM

Landscape Architect

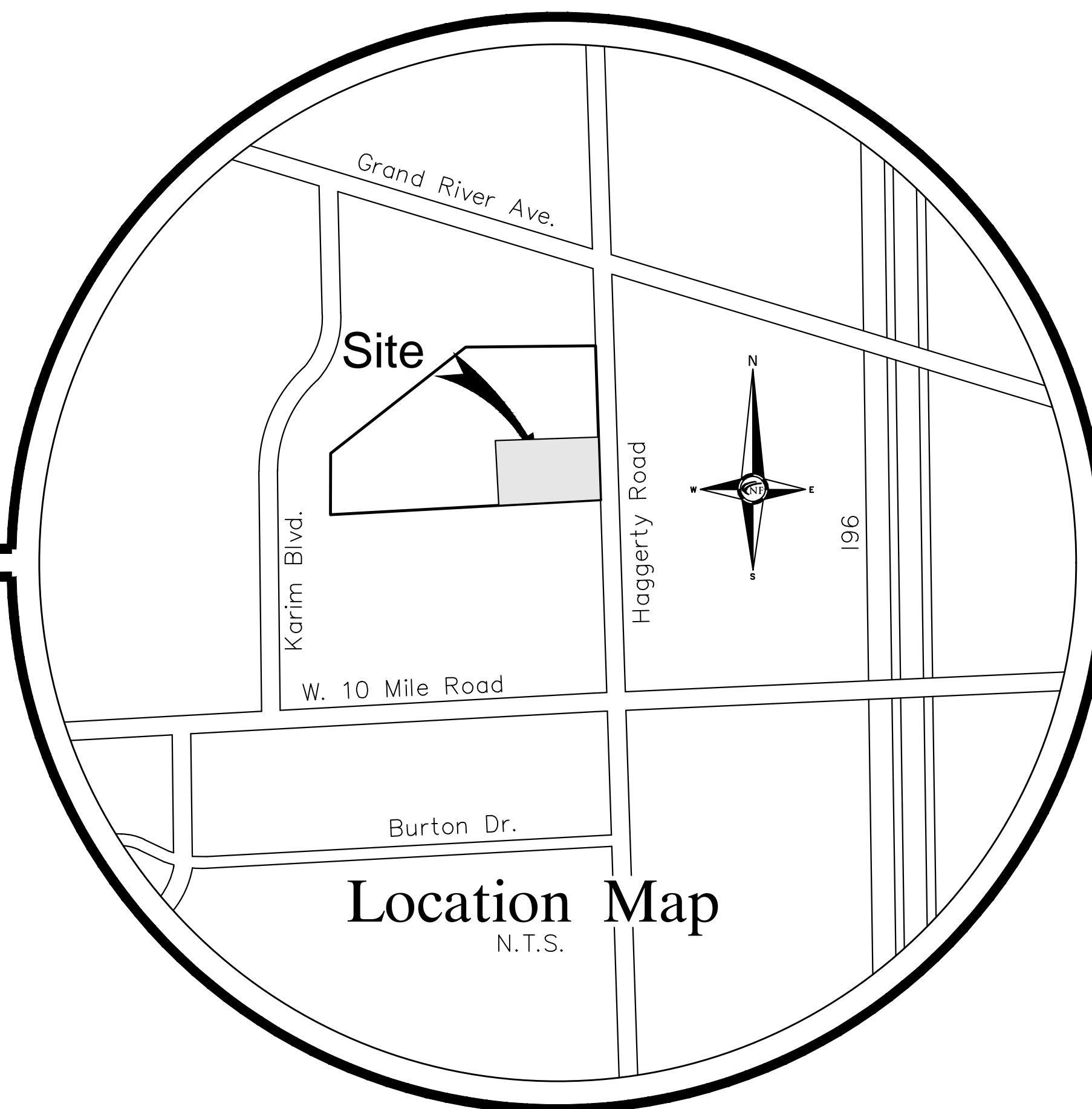
NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVENUE
PONTIAC, MICHIGAN 48342
CONTACT:
MR. GEORGE OSTROWSKI
PHONE: (248) 332-7931
EMAIL: GOSTROWSI@NFE-ENGR.COM

Photometric Consultant

GASSER BUSH AND ASSOCIATES
30984 INDUSTRIAL ROAD
LIVONIA, MICHIGAN 48150
CONTACT: MS. TARA (VERLINDEN) NIXON, LC
PHONE: (734) 742-2009
EMAIL: TVERLINDEN@GASSERBUSH.COM

City of Novi, Oakland County, Michigan Preliminary Site Plan Prepared For Lithia Motors, Inc.

PART OF THE SE 1/4 OF SECTION 23, T.1N., R.8E.,
NOVI,
OAKLAND COUNTY, MICHIGAN



Project Name

Lithia Motors, Inc. Porsche of Novi

SHEET INDEX

- C0 Cover Sheet
- C1 Overall Site Plan
- C2 Boundary, Topographic, and Tree Survey
- C3 Preliminary Site Plan
- C4 Paving and Grading Plan
- C5 Storm Water Management Plan
- C6 Storm Water Management Calculations
- C7 Storm Sewer Profiles
- C8 Soil Erosion Control and Drainage Area Plan
- C9 Truck Maneuvering Plan
- C10 Fire Protection Plan
- C11 Notes and Details
- C12 Notes and Details

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

1 of 1 Photometric Plan

- TS1.4 Composite Floor Plan
- SP1.1 Architectural Site Plan
- A2.1 Exterior Elevations
- A2.2 Exterior Elevations

- 1 of 2 City of Novi Paving Standard Details
- 2 of 2 City of Novi Paving Standard Details
- 1 of 3 City of Novi Sanitary Sewer Standard Details
- 2 of 3 City of Novi Sanitary Sewer Standard Details
- 3 of 3 City of Novi Sanitary Sewer Standard Details
- 1 of 2 City of Novi Storm Sewer Standard Details
- 2 of 2 City of Novi Storm Sewer Standard Details
- 1 of 5 City of Novi Water Main Standard Details
- 2 of 5 City of Novi Water Main Standard Details
- 3 of 5 City of Novi Water Main Standard Details
- 4 of 5 City of Novi Water Main Standard Details
- 5 of 5 City of Novi Water Main Standard Details

LEGAL DESCRIPTION

LAND SITUATED IN THE STATE OF MICHIGAN, COUNTY OF OAKLAND, CITY OF NOVI, AS DESCRIBED AS:

PARCEL I:

A PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 24; THENCE SOUTH 88 DEGREES 40 MINUTES 57 SECONDS WEST (RECORDED AS SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST) 60.02 FEET TO A POINT ON THE WESTERLY LINE OF HAGGERTY ROAD; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 583.59 (RECORDED AS 571.73) FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST 800.00 FEET; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 190.00 FEET; THENCE NORTH 49 DEGREES 33 MINUTES 57 SECONDS EAST 150.25 FEET; THENCE SOUTH 89 DEGREES 56 MINUTES 20 SECONDS EAST 685.42 FEET TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE SOUTH 00 DEGREES 03 MINUTES 40 SECONDS WEST 265.00 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING.

PARCEL II:

A PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 24; THENCE SOUTH 88 DEGREES 40 MINUTES 57 SECONDS WEST (RECORDED AS SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST) 60.02 FEET TO A POINT ON THE WESTERLY LINE OF HAGGERTY ROAD; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 848.59 (RECORDED AS 836.73) FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING; THENCE NORTH 51 DEGREES 56 MINUTES 03 SECONDS EAST (RECORDED AS NORTH 51 DEGREES 56 MINUTES 03 SECONDS EAST) 289.40 FEET; THENCE SOUTH 89 DEGREES 56 MINUTES 20 SECONDS EAST 368.93 FEET TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE SOUTH 00 DEGREES 03 MINUTES 40 SECONDS WEST 254.54 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING

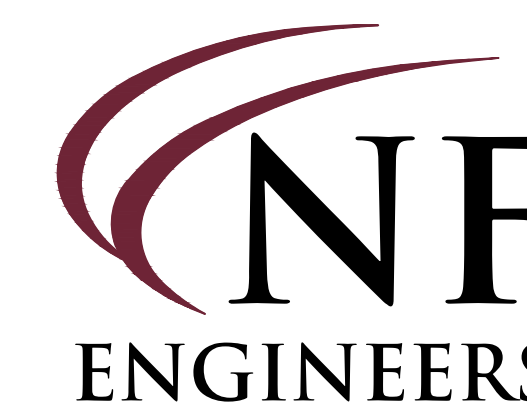
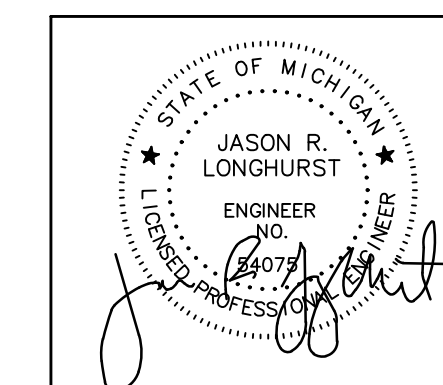
COMMONLY KNOWN AS: 24315 HAGGERTY, NOVI, MI
TAX ID: 22-24-476-022 (PARCEL I AND II TOGETHER)

REVISIONS:

- 2022-11-17 - PRELIMINARY SITE PLAN REVIEW
- 2023-01-13 - REVISED PER PRELIMINARY SITE PLAN REVIEW

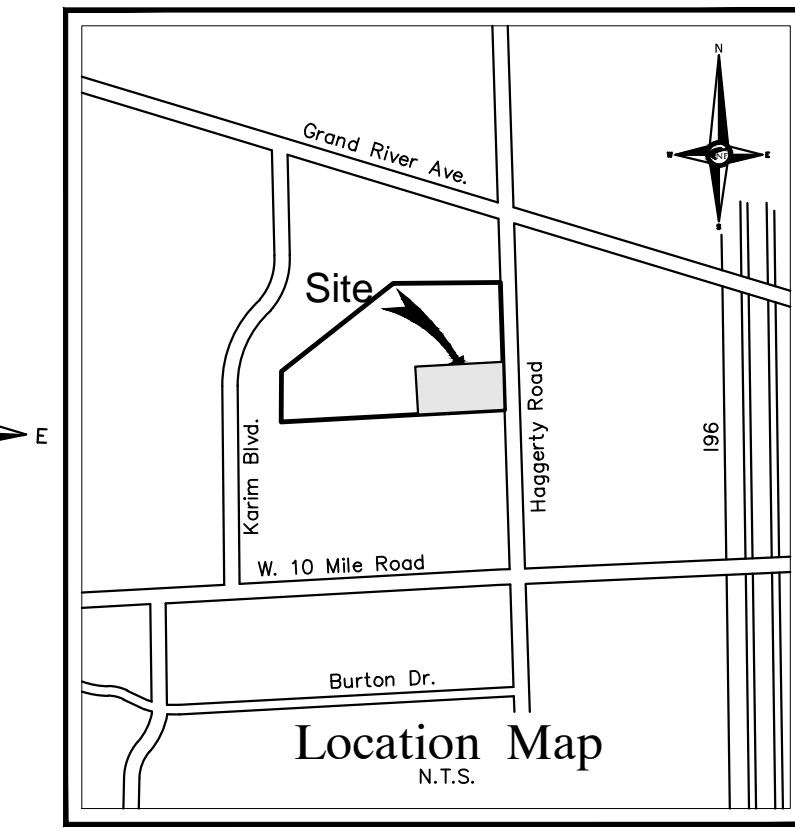
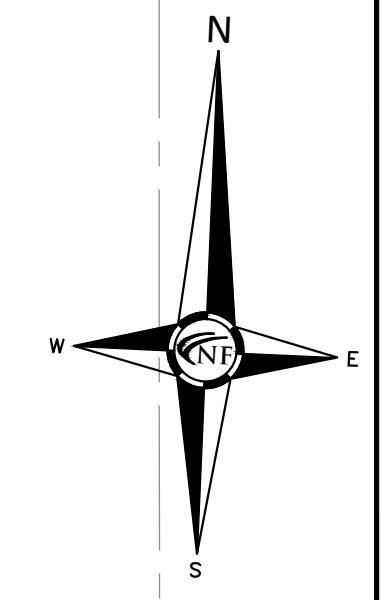


N & F JOB #1921-05

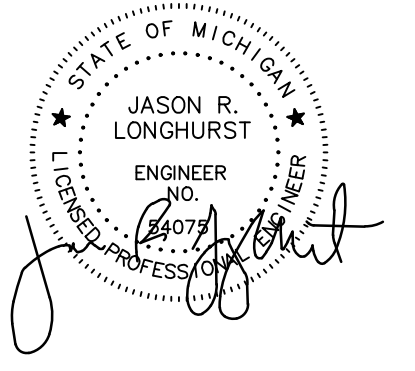


CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

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



SEAL



PROJECT
 Lithia Motors, Inc.
 Porsche of Novi

CLIENT
 Lithia Motors, Inc.
 150 N. Bartlett Street
 Medford, OR 97501

Contact:
 Ms. Anne Breck
 Tel: (541) 734-3043
 email: abreck@lithia.com

PROJECT LOCATION
 Part of the Southeast 1/4 of
 Section 23, Town 1 North,
 Range 8 East, City of Novi,
 Oakland County, Michigan

SHEET
 Overall Site Plan



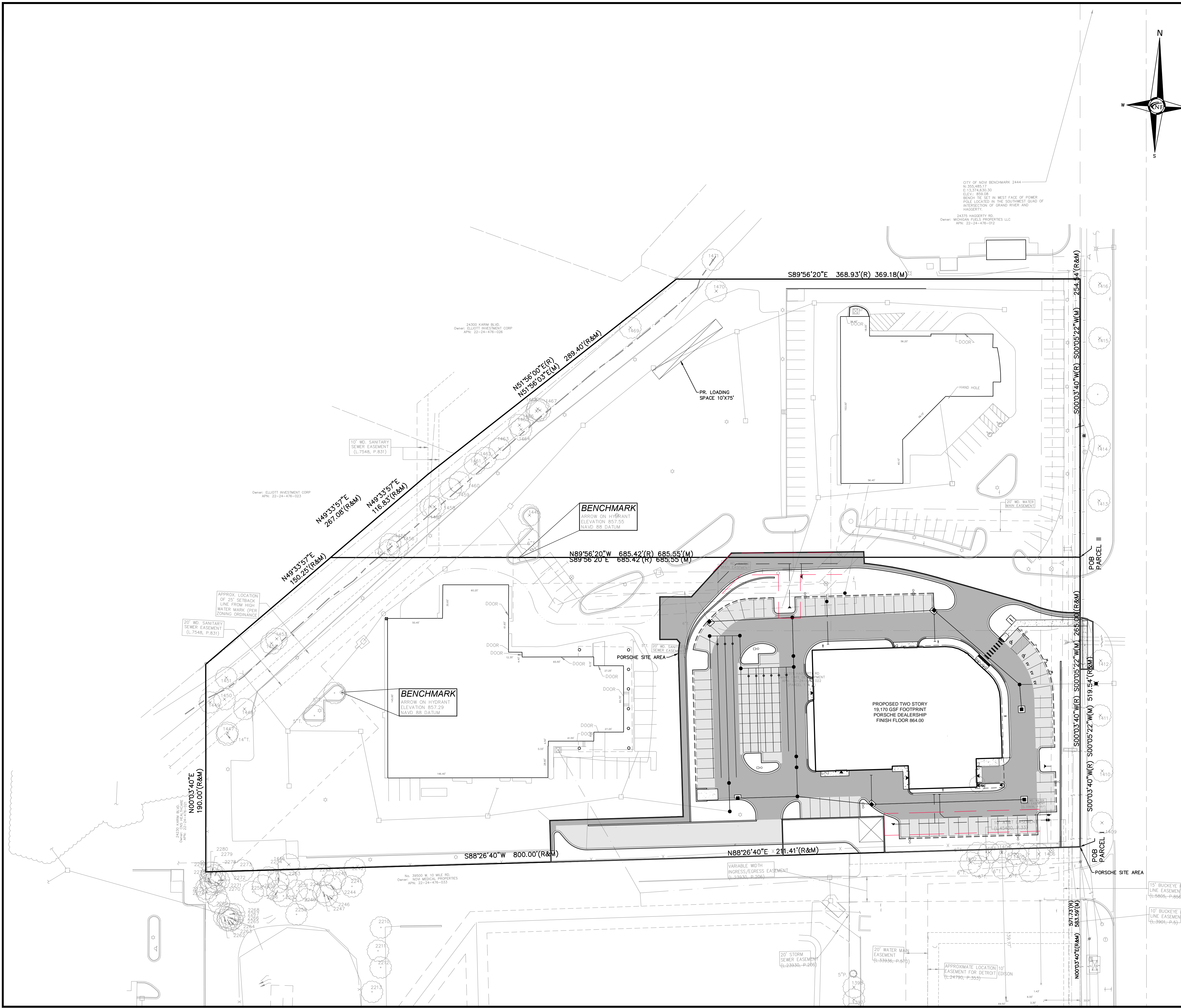
DATE ISSUED/REVISED
 2022-11-17 PRELIMINARY SITE PLAN REVIEW
 2023-01-13 REV. PER PRELIM. SITE PLAN REVIEW

DRAWN BY:
 T. Wood
 DESIGNED BY:
 T. Wood
 APPROVED BY:
 J. Longhurst

DATE:
 November 17, 2022

SCALE: 1" = 40'

NFE JOB NO. SHEET NO.
 1921-05 C1



LEGAL DESCRIPTION

LAND SITUATED IN THE STATE OF MICHIGAN, COUNTY OF OAKLAND, CITY OF NOVI, AS DESCRIBED AS:

PARCEL I:
 A PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 24; THENCE SOUTH 88 DEGREES 40 MINUTES 57 SECONDS WEST (RECORDED AS SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST) 60.02 FEET TO A POINT ON THE WESTERLY LINE OF HAGGERTY ROAD; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 583.59 (RECORDED AS 571.73) FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST 800.00 FEET; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 190.00 FEET; THENCE NORTH 49 DEGREES 33 MINUTES 57 SECONDS EAST 150.25 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 20 SECONDS EAST 685.42 FEET TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE SOUTH 00 DEGREES 03 MINUTES 40 SECONDS WEST 265.00 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING.

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COMMONLY KNOWN AS: 24315 HAGGERTY, NOVI, MI
 TAX ID: 22-24-476-022 (PARCEL I AND II TOGETHER)

MISS DIG / UTILITY DISCLAIMER NOTE

A MISS DIG TICKET NUMBER B90791822, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY. DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON AUGUST 6, 2019. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISHED PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

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.

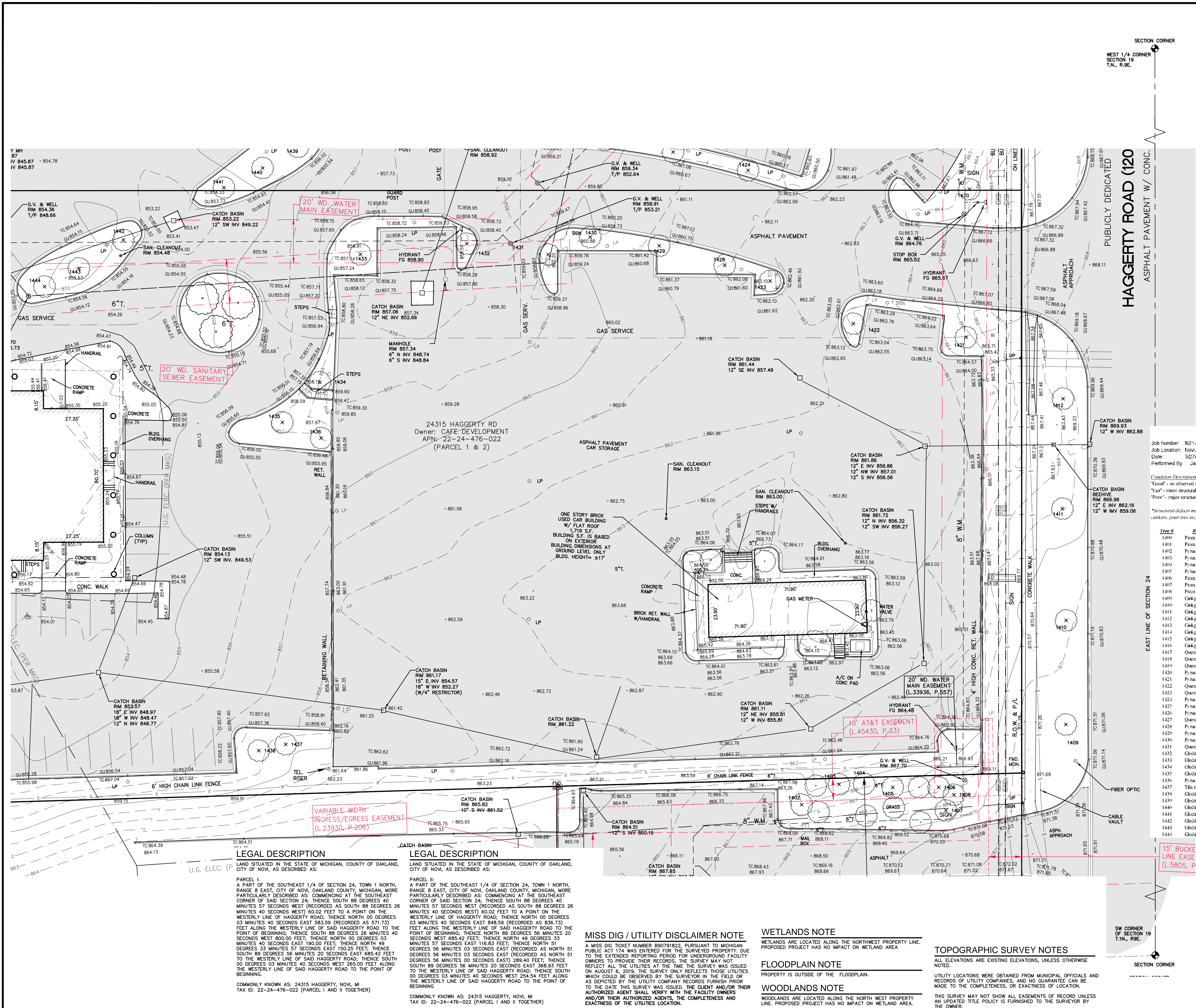
THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.

PAVING LEGEND

	PROPOSED CONCRETE PAVEMENT
	PROPOSED 4" ASPHALT PAVEMENT ON 8" AGGREGATE BASE
	PROPOSED 6" ASPHALT PAVEMENT ON 10" AGGREGATE BASE

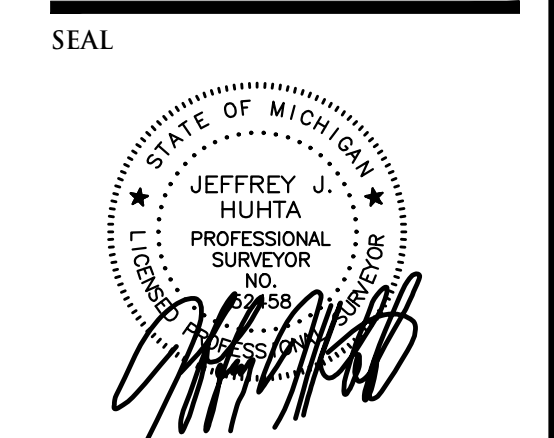
LEGEND

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



NF ENGINEERS
 CIVIL ENGINEERS
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 LAND PLANNERS

NOWAK & FRAUS ENGINEERS
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 WWW.NOWAKFRAUS.COM



PROJECT
 Lithia Motors, Inc.
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CLIENT
 Lithia Motors, Inc.
 150 N. Bartlett Street
 Medford, OR 97501

Contact:
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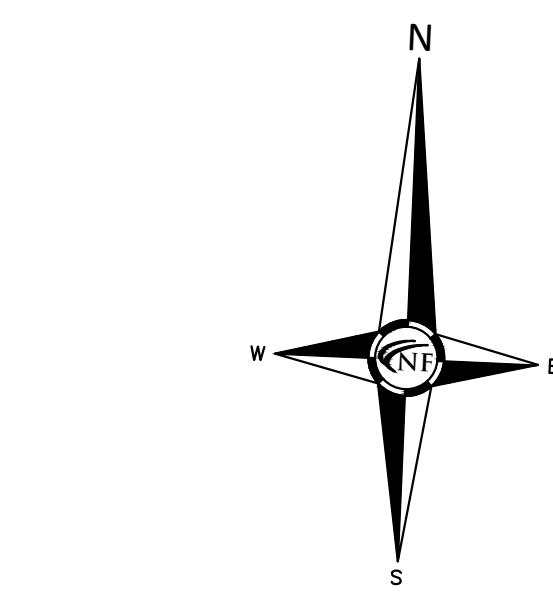
PROJECT LOCATION
 Part of the Southeast 1/4 of
 Section 23, Town 1 North,
 Range 8 East, City of Novi,
 Oakland County, Michigan

SHEET
 Boundary, Topographic
 and Tree Survey



DATE ISSUED/REVISED
 2022-11-17 PRELIMINARY SITE PLAN REVIEW
 2023-01-13 REV. PER. PRELIM. SITE PLAN REVIEW

DRAWN BY:
 T. Wood
 DESIGNED BY:
 J. Huhta
 APPROVED BY:
 J. Huhta
 Date:
 August 06, 2019
 SCALE: 1" = 20'
 NFE JOB NO. SHEET NO.
 1921-05 C2



Tree Inventory List

Tree #	Botanical Name	Common Name	Dia.	Type	Other Dia.	Condition
1400	Picea pungens	Colorado Blue Spruce	10			Good
1401	Picea pungens	Colorado Blue Spruce	9			Good
1402	Pinus calycarpa	Bradford Pear	9			Good
1403	Pinus calycarpa	Bradford Pear	8			Fair
1404	Pinus calycarpa	Bradford Pear	9			Good
1405	Pinus calycarpa	Bradford Pear	9			Good
1406	Picea pungens	Colorado Blue Spruce	10			Good
1407	Picea pungens	Colorado Blue Spruce	11			Good
1408	Picea pungens	Colorado Blue Spruce	11			Fair
1409	Quercus bicolor	Bar Oak	9			Good
1410	Quercus bicolor	Bar Oak	12			Good
1411	Quercus bicolor	Bar Oak	10			Fair
1412	Quercus bicolor	Bar Oak	13			Good
1413	Quercus bicolor	Bar Oak	8			Good
1414	Quercus bicolor	Bar Oak	9			Good
1415	Quercus bicolor	Bar Oak	12			Good
1416	Quercus bicolor	Bar Oak	10			Good
1417	Quercus macrocarpa	Bar Oak	8			Good
1418	Quercus macrocarpa	Bar Oak	8			Good
1419	Quercus macrocarpa	Bar Oak	9			Good
1420	Pinus calycarpa	Bradford Pear	13	Twin	9	Good
1421	Pinus calycarpa	Bradford Pear	8	Multiple	8.5	Poor
1422	Quercus macrocarpa	Bar Oak	8			Good
1423	Quercus macrocarpa	Bar Oak	8			Good
1424	Pinus calycarpa	Bradford Pear	5	Multiple	5.5-4.3	Good
1425	Pinus calycarpa	Bradford Pear	5	Multiple	5.5-4.3.3	Good
1426	Pinus calycarpa	Bradford Pear	6	Multiple	5.3-3.3	Good
1427	Quercus macrocarpa	Bar Oak	10			Fair
1428	Pinus calycarpa	Bradford Pear	5	Multiple	5.5-4.4.3.3	Good
1429	Pinus calycarpa	Bradford Pear	5	Multiple	4.4-3.3.3	Good
1430	Pinus calycarpa	Bradford Pear	8	Multiple	5.5.3	Good
1431	Quercus macrocarpa	Bar Oak	5			Good
1432	Cedrela tricanthus	Honeylocust	8			Good
1433	Cedrela tricanthus	Honeylocust	9			Good
1434	Cedrela tricanthus	Honeylocust	9			Good
1435	Cedrela tricanthus	Honeylocust	11			Good
1436	Pinus calycarpa	Bradford Pear	6	Multiple	5.5-4.4	Good
1437	Cedrela tricanthus	Honeylocust	13			Good
1438	Cedrela tricanthus	Honeylocust	10			Good
1439	Cedrela tricanthus	Honeylocust	10			Good
1440	Cedrela tricanthus	Honeylocust	10			Good
1441	Cedrela tricanthus	Honeylocust	8			Good
1442	Cedrela tricanthus	Honeylocust	8			Good
1443	Cedrela tricanthus	Honeylocust	9			Good
1444	Cedrela tricanthus	Honeylocust	8			Good

Job Number: #921-01
 Job Location: Novi, MI
 Date: 8/27/2019
 Performed By: Jacob R. Hamilton
 Forestry Reg No: 3301046119

Condition Description Notes:
 "Good" - no observed structural defects
 "Fair" - minor structural defects, marginal form, some insect activity noted
 "Poor" - major structural defects, poor form, insect infestation
 *Structural defects may include decayed wood, cracks, root problems, weak branch unions, cankers, poor tree architecture, dead failed branches due to various causes.

LEGEND

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

LEGAL DESCRIPTION
 LAND SITUATED IN THE STATE OF MICHIGAN, COUNTY OF OAKLAND, CITY OF NOVI, AS DESCRIBED AS:
 PARCEL I: A PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 24; THENCE SOUTH 88 DEGREES 40 MINUTES 57 SECONDS WEST (RECORDED AS SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST) 80.02 FEET TO A POINT ON THE WESTERLY LINE OF HAGGERTY ROAD; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 583.59 (RECORDED AS 571.73) FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST 800.00 FEET; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 190.00 FEET; THENCE NORTH 49 DEGREES 33 MINUTES 57 SECONDS EAST 150.25 FEET; THENCE SOUTH 89 DEGREES 56 MINUTES 20 SECONDS EAST 685.42 FEET TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE SOUTH 00 DEGREES 03 MINUTES 40 SECONDS WEST 285.00 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING.
 COMMONLY KNOWN AS: 24315 HAGGERTY, NOVI, MI
 TAX ID: 22-24-476-022 (PARCEL I AND II TOGETHER)

LEGAL DESCRIPTION
 LAND SITUATED IN THE STATE OF MICHIGAN, COUNTY OF OAKLAND, CITY OF NOVI, AS DESCRIBED AS:
 PARCEL II: A PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 24; THENCE SOUTH 88 DEGREES 40 MINUTES 57 SECONDS WEST (RECORDED AS SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST) 80.02 FEET TO A POINT ON THE WESTERLY LINE OF HAGGERTY ROAD; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 583.59 (RECORDED AS 571.73) FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 26 MINUTES 40 SECONDS WEST 800.00 FEET; THENCE NORTH 00 DEGREES 03 MINUTES 40 SECONDS EAST 190.00 FEET; THENCE NORTH 49 DEGREES 33 MINUTES 57 SECONDS EAST 150.25 FEET; THENCE SOUTH 89 DEGREES 56 MINUTES 20 SECONDS EAST 685.42 FEET TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE SOUTH 00 DEGREES 03 MINUTES 40 SECONDS WEST 285.00 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING.
 COMMONLY KNOWN AS: 24315 HAGGERTY, NOVI, MI
 TAX ID: 22-24-476-022 (PARCEL I AND II TOGETHER)

MISS DIG / UTILITY DISCLAIMER NOTE
 A MISS DIG TICKET NUMBER B90791822, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY. DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON AUGUST 6, 2019. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISH PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

WETLANDS NOTE
 WETLANDS ARE LOCATED ALONG THE NORTHWEST PROPERTY LINE. PROPOSED PROJECT HAS NO IMPACT ON WETLAND AREA.

FLOODPLAIN NOTE
 PROPERTY IS OUTSIDE OF THE FLOODPLAIN.

WOODLANDS NOTE
 WOODLANDS ARE LOCATED ALONG THE NORTH WEST PROPERTY LINE. PROPOSED PROJECT HAS NO IMPACT ON WETLAND AREA.

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.

ADJACENT LAND ZONING AND USE

ADJACENT LAND	ZONING	APN	USE
NORTH	B-3	22-24-476-012	BUSINESS
NORTH	OS-1	22-24-476-026	OFFICE
WEST	OS-1	22-24-476-021	OFFICE
WEST	OS-1	22-24-476-033	OFFICE
SOUTH	B-3	22-24-476-030	OFFICE
EAST	FARMINGTON HILLS B-3	23-19-351-020	BUSINESS
EAST	FARMINGTON HILLS B-3	23-19-351-015	BUSINESS

LIGHT POLE NOTE

ALL PROPOSED LIGHT POLES HAVE A FOUNDATION DEPTH OF 48 INCHES. SEE SHEET 13 FOR STANDARD DETAIL.

CITY OF NOVI NOTE

NO MAJOR AUTOMOBILE REPAIR OR REFINISHING WILL BE DONE ON THE LOT.

PEV CHARGING STATIONS AVAILABLE TO THE PUBLIC SHALL BE MAINTAINED IN SAFE AN OPERATIONAL REPAIR AND SHALL CLEARLY DISPLAY A TOLL-FREE TELEPHONE NUMBER TO REPORT ANY PROBLEMS.

NO SOLAR PANELS OR CANOPIES ARE PROPOSED AS A PART OF THE ELECTRIC VEHICLE CHARGING STATIONS.

PEV CHARGING STATIONS SHALL BE INSTALLED IN A SUITABLE LOCATION SUCH THAT ANY CORDS CONNECTING THE CHARGING STATION WITH THE VEHICLE WILL NOT EXTEND ACROSS A PEDESTRIAN WALKWAY OR WILL OTHERWISE PRESENT A TRIPPING HAZARD.

NOTE

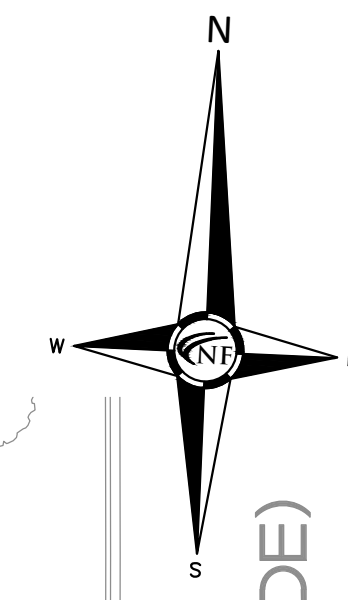
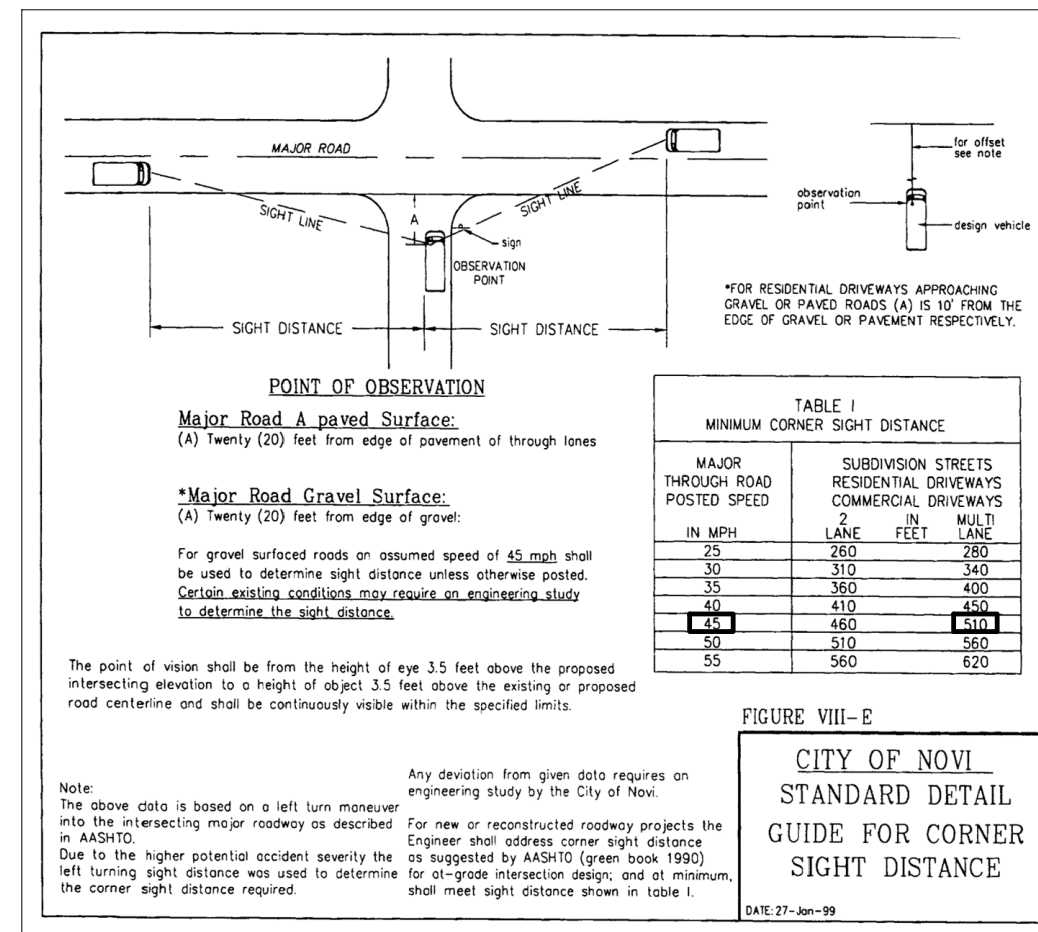
ALL WORK SHALL CONFORM TO THE CITY OF NOVI STANDARDS AND SPECIFICATIONS. (TYP)

PROPERTY FRONTAGE NOTE

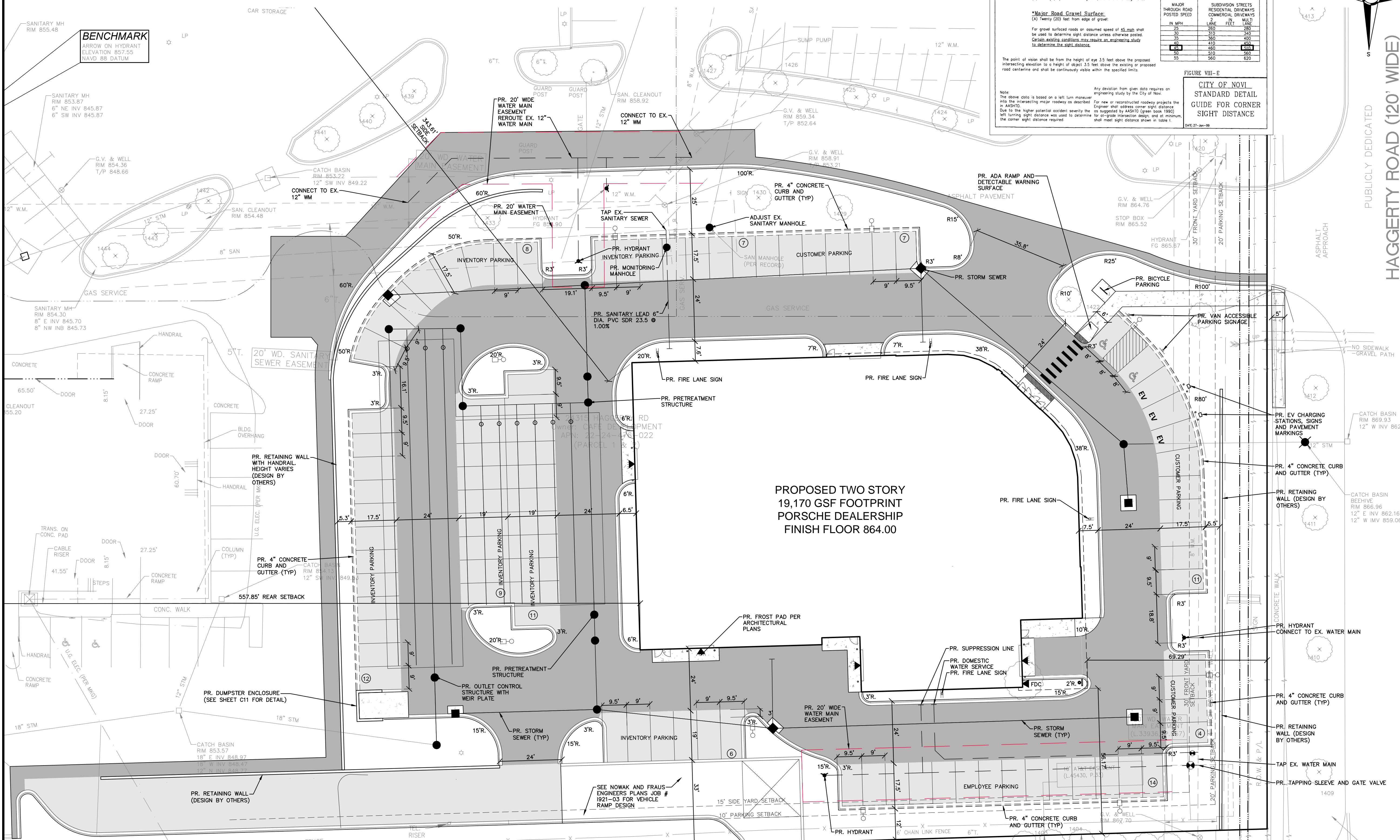
HAGGERTY ROAD PROPERTY FRONTAGE IS 519.54 FEET.

LOADING SPACE NOTE

PROPOSED LOADING SPACE 20'X60' PROVIDED IN THE PARKING LOT TO THE NORTHWEST OF THE PROPERTY. SEE PLAN SHEET C1 FOR THE LOCATION.



PUBLICLY DEDICATED
HAGGERTY ROAD (120' WIDE)



**PROPOSED TWO STORY
19,170 GSF FOOTPRINT
PORSCHE DEALERSHIP
FINISH FLOOR 864.00**

TRUCK MANEUVERING NOTE

THE LARGEST VEHICLE THAT WILL NEED TO MANEUVER THE PROPOSED SITE IS A FIRE TRUCK. THE MANEUVERING PLAN FOR A TRASH COLLECTION VEHICLE CAN BE FOUND ON SHEET C8. FIRE TRUCK MANEUVERING CAN BE FOUND ON PLAN SHEET C9. CAR-CARRIERS WILL MANEUVER THE ADJACENT NORTHERN PARKING ON THE PROPERTY AND THEREFORE WILL NOT NEED TO ENTER THE PORSCHE AREA OF THE PROPERTY.

DEWATERING NOTE

DEWATERING IS NOT ANTICIPATED DURING THE CONSTRUCTION OF THIS PROJECT

CITY OF NOVI SIGNING AND STRIPING NOTES

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 ADJUT 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.

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-CORNER 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-CORNER 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.

SITE INFORMATION

EXISTING ZONING: B-3 GENERAL BUSINESS DISTRICT

SITE AREA: 24315 HAGGERTY ROAD
TOTAL PROPERTY AREA: 350,320.53 SF. OR 8.04 ACRES
PROJECT SITE AREA: 97,208.53 SF. OR 2.23 ACRES

MIN. YARD SETBACKS:	REQUIRED	PROPOSED
FRONT (EAST)	30'	69.29 FT.
SIDE (SOUTH)	15'	56.17 FT.
REAR (WEST)	15'	557.85 FT.
SIDE (NORTH)	15'	343.61 FT.

MIN. PARKING SETBACKS:	REQUIRED	PROPOSED
FRONT (EAST)	20'	21.28 FT.
SIDE (SOUTH)	10'	12.00 FT.
REAR (WEST)	10'	449.63 FT.
SIDE (NORTH)	10'	287.27 FT.

VEHICLE PARKING:
REQUIRED: MOTOR VEHICLE SALVES AND SERVICE ONE (1) FOR EACH TWO HUNDRED (200) SQUARE FEET OF USABLE FLOOR AREA OF SALES ROOM AND ONE (1) FOR EACH ONE (1) AUTO SERVICE STALL IN THE SERVICE ROOM
5,636 SF SALES ROOM / 200 SF = 28
+ 8 SERVICE BAYS = 8

REQUIRED: 36 SPACES
PROVIDED: 22 CUSTOMER
14 EMPLOYEE
54 INVENTORY
90 TOTAL
(INCLUDING 2 VAN ACCESSIBLE SPACES)

BIKE PARKING:
REQUIRED: MOTOR VEHICLE SALES 2 SPACES
PROVIDED: 2 SPACES

PROJECT SITE COVERAGE:	AREA (SF)	% LOT COVERAGE
SURFACE:	19,170 SF	23.92%
IMPERVIOUS:	46,090 SF	58.23%
LANDSCAPING:	14,280 SF	17.83%
TOTAL:	80,150 SF	100.00%

ESTIMATED QUANTITIES

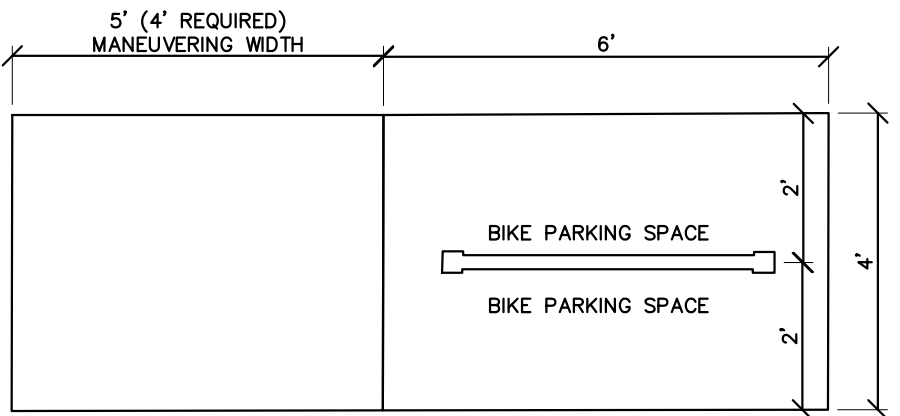
DESCRIPTION	QUANTITY	UNITS
NO PARKING FIRE LANE SIGN (R8-31) 12"x18"	10	EA.
VAN ACCESSIBLE PARKING SIGN (R7-8) 12"x18"	2	EA.
VAN ACCESSIBLE PARKING SIGN (R7-BP) 12"x8"	2	EA.

PAVING LEGEND

	PROPOSED CONCRETE PAVEMENT
	PROPOSED 4" ASPHALT PAVEMENT ON 9" AGGREGATE BASE
	PROPOSED 6" ASPHALT PAVEMENT ON 10" AGGREGATE BASE

LEGEND

	MANHOLE	EXISTING SANITARY SEWER
	HYDRANT	SAN. CLEAN OUT
	MANHOLE CATCH BASIN	EXISTING WATER MAIN
	UTILITY POLE	EXISTING STORM SEWER
	GUY WIRE	EX. R. Y. CATCH BASIN
	LIGHT POLE	EXISTING BURIED CABLES
	SIGN	OVERHEAD LINES
	EXISTING GAS MAIN	
	MANHOLE	PR. SANITARY SEWER
	HYDRANT	PR. WATER MAIN
	INLET	PR. STORM SEWER
	MANHOLE	PR. R. Y. CATCH BASIN
	PROPOSED LIGHT POLE	
	PR. 6" CONCRETE CURB AND GUTTER	
	PR. 4" CONCRETE CURB AND GUTTER	

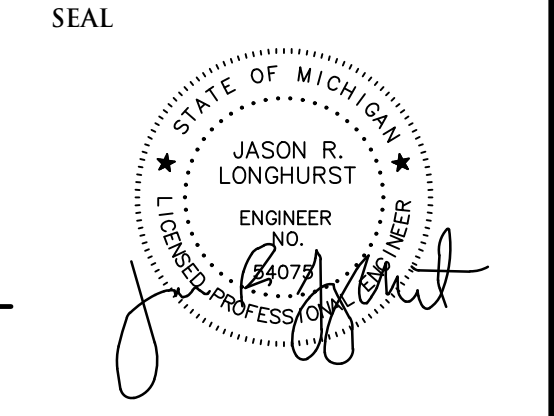


CITY OF NOVI BICYCLE PARKING LAYOUT



**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
Lithia Motors, Inc.
Porsche of Novi

CLIENT
Lithia Motors, Inc.
150 N. Bartlett Street
Medford, OR 97501

Contact:
Ms. Anne Breck
Tel: (541) 734-3043
email: abreck@lithia.com

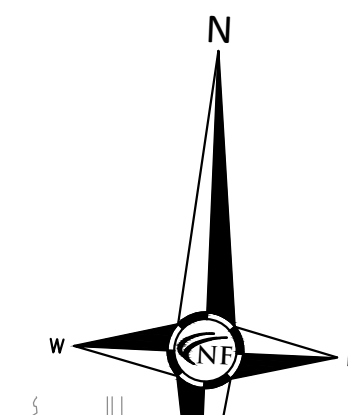
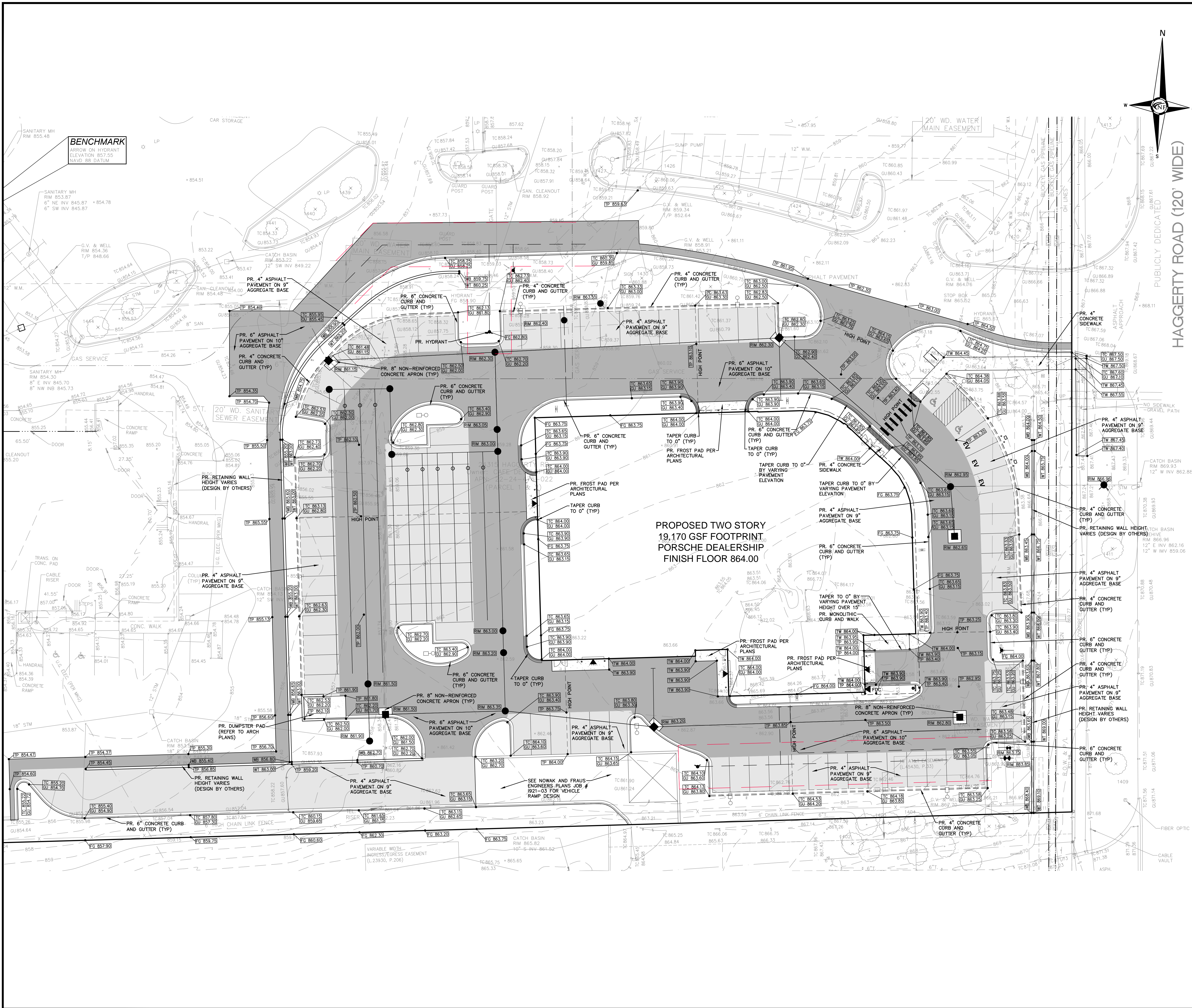
PROJECT LOCATION
Part of the Southeast 1/4 of Section 23, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan

SHEET
Preliminary Site Plan



DATE ISSUED/REVISED
2022-11-17 PRELIMINARY SITE PLAN REVIEW
2023-01-13 REV. PER PRELIM. SITE PLAN REVIEW

DRAWN BY:
B. Girbach
DESIGNED BY:
T. Wood
APPROVED BY:
J. Longhurst
DATE:
November 17, 2022
SCALE: 1" = 20'
20 10 0 10 20 30
NFE JOB NO. SHEET NO.
1921-05 C3



HAGGERTY ROAD (120' WIDE)
PUBLICLY DEDICATED

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 - HMA 4E3 SURFACE COURSE - HMA 5E3 BOND COAT - MDOT SS-1 EMULSION AT 0.10 GALLON PER SQUARE YARD PG 64-22 MAXIMUM 2.5 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-S164.

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 LICENSES AND 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 RAMP.

SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, 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.

PAVING LEGEND

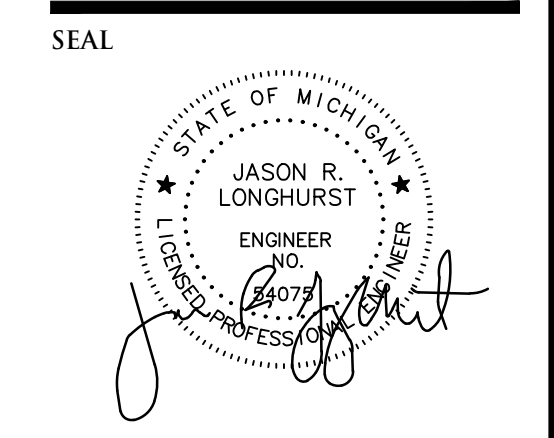
	PROPOSED CONCRETE PAVEMENT
	PROPOSED 4" ASPHALT PAVEMENT ON 9" AGGREGATE BASE
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LEGEND

	MANHOLE		EXISTING SANITARY SEWER
	HYDRANT		SAN. CLEAN OUT
	MANHOLE CATCH BASIN		EXISTING WATERMAIN
	UTILITY POLE		EXISTING STORM SEWER
	GUY POLE		EX. R. Y. CATCH BASIN
	GUY WIRE		EXISTING BURIED CABLES
	LIGHT POLE		OVERHEAD LINES
	SIGN		EXISTING GAS MAIN
	PROPOSED LIGHT POLE		PR. SANITARY SEWER
	PR. TOP OF CURB ELEVATION		PR. WATER MAIN
	PR. GUTTER ELEVATION		PR. STORM SEWER
	PR. TOP OF WALK ELEVATION		PR. R. Y. CATCH BASIN
	PR. TOP OF P.W.M. ELEVATION		PROPOSED LIGHT POLE
	FINISH GRADE ELEVATION		PR. TOP OF CURB ELEVATION
	PR. 6" CONCRETE CURB AND GUTTER		PR. GUTTER ELEVATION
	PR. 4" CONCRETE CURB AND GUTTER		PR. TOP OF WALK ELEVATION

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PROJECT LOCATION
Part of the Southeast 1/4 of Section 23, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan

SHEET
Paving and Grading Plan



DATE ISSUED/REVISED
2022-11-17 PRELIMINARY SITE PLAN REVIEW
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DRAWN BY:
B. Girbach

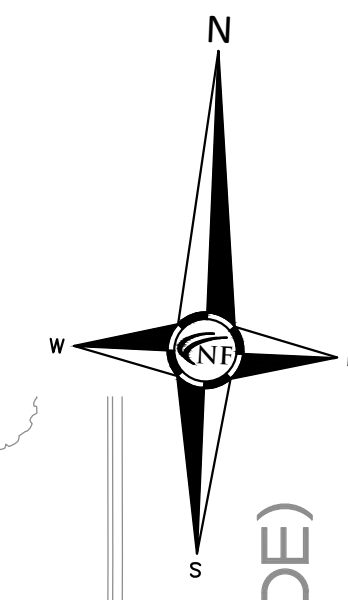
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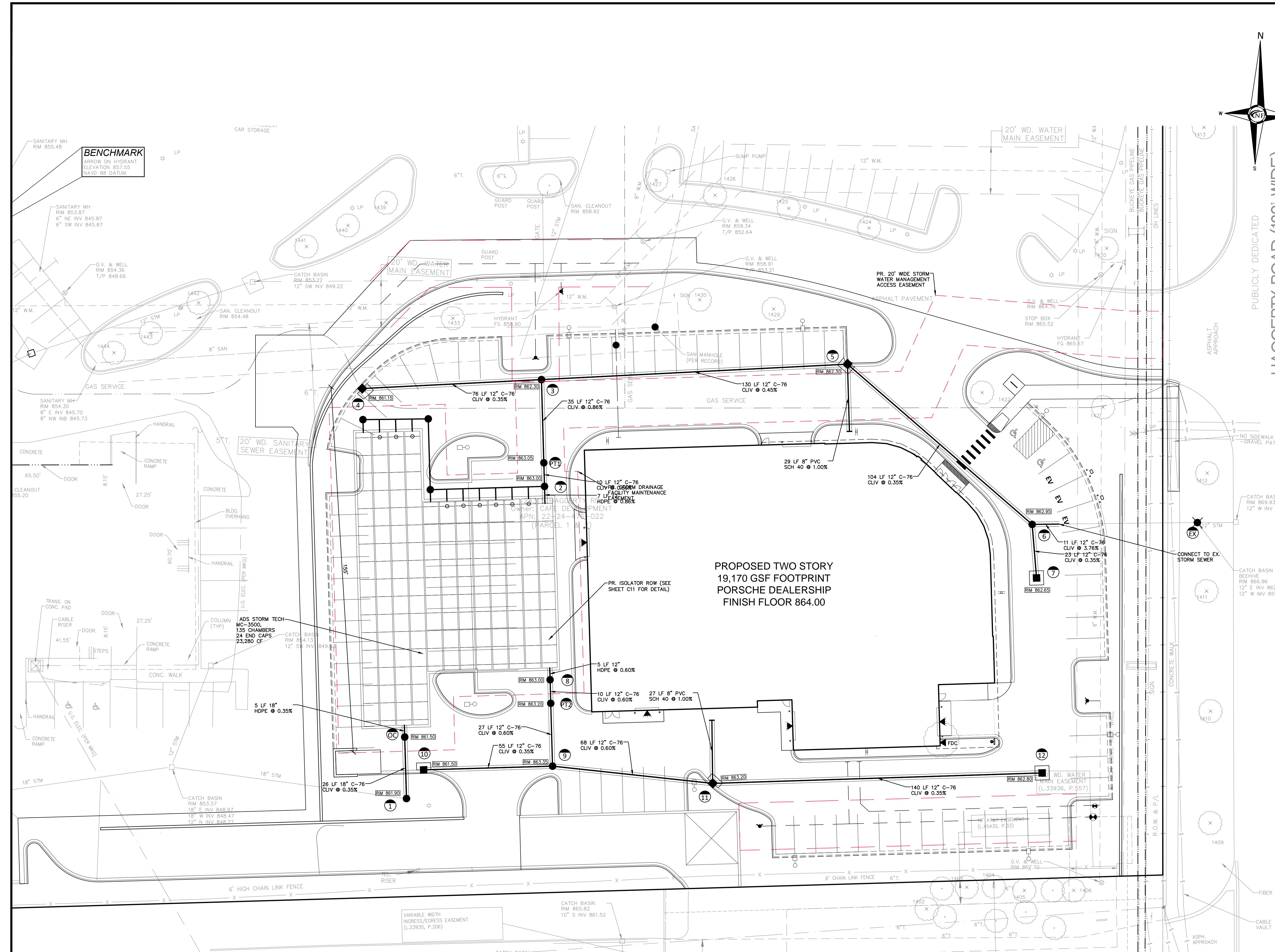
DATE:
November 17, 2022

SCALE: 1" = 20'

NFE JOB NO. SHEET NO.
1921-05 C4



PUBLICLY DEDICATED
HAGGERTY ROAD (120' WIDE)



PROPOSED TWO STORY
19,170 GSF FOOTPRINT
PORSCHE DEALERSHIP
FINISH FLOOR 864.00

Storm Drainage Structure Schedule	
Structure Name	Structure Details
#1 4' DIA. MANHOLE EJW 1040A	PR. RIM 861.90 PR. 18" N. INV. 852.00 EX. 18" W. INV. 851.49
#2 4' DIA. MANHOLE EJW 1040A	PR. RIM 863.00 PR. 12" N. INV. 854.70 PR. 12" S. INV. 854.70
#3 4' DIA. MANHOLE EJW 1040A	PR. RIM 862.30 PR. 12" E. INV. 855.29 PR. 12" W. INV. 856.65 PR. 12" S. INV. 855.19
#4 4' DIA. CATCH BASIN WITH 2' SUMP EJW 7045 M1	PR. RIM 861.15 PR. 12" E. INV. 856.92
#5 4' DIA. CATCH BASIN WITH 2' SUMP EJW 7045 M1	PR. RIM 862.95 PR. 12" SE. INV. 855.97 PR. 8" S. INV. 859.43 PR. 12" W. INV. 855.87
#6 4' DIA. MANHOLE EJW 1040A CONNECT TO EX. STORM	PR. RIM 862.95 PR. 12" S. INV. 858.25 PR. 12" E. INV. 856.43 PR. 12" NW. INV. 856.34
#7 4' DIA. CATCH BASIN WITH 2' SUMP EJW 7045 M1	PR. RIM 862.65 PR. 12" N. INV. 858.33
#8 4' DIA. MANHOLE EJW 1040A	PR. RIM 863.00 PR. 12" S. INV. 856.69 PR. 12" N. INV. 856.79
#9 4' DIA. MANHOLE EJW 1040A	PR. RIM 863.35 PR. 12" W. INV. 857.11 PR. 12" E. INV. 857.01
#10 4' DIA. CATCH BASIN WITH 2' SUMP EJW 7045 M1	PR. RIM 861.50 PR. 12" E. INV. 857.30
#11 4' DIA. CATCH BASIN WITH 2' SUMP EJW 7045 M1	PR. RIM 863.20 PR. 12" E. INV. 858.07 PR. 8" N. INV. 859.43 PR. 12" W. INV. 857.52
#12 4' DIA. CATCH BASIN WITH 2' SUMP EJW 7045 M1	PR. RIM 862.80 PR. 12" W. INV. 858.55
#EX EX. CATCH BASIN	PR. RIM 866.96 EX. 12" W. INV. 859.06
#OC 6' DIA. OUTLET CONTROL STRUCTURE WITH WEIR PLATE AND STAGED OUTLET EJW 1040 A	PR. RIM 861.50 PR. 18" N. INV. 852.11 PR. 18" S. INV. 852.09
#PT1 5' PRETREATMENT STRUCTURE ADS BARRACUDA MAX 55	PR. RIM 863.05 PR. 12" N. INV. 854.89 PR. 12" S. INV. 854.79
#PT2 5' PRETREATMENT STRUCTURE ADS BARRACUDA MAX 55	PR. RIM 863.20 PR. 12" N. INV. 856.85 PR. 12" S. INV. 856.75

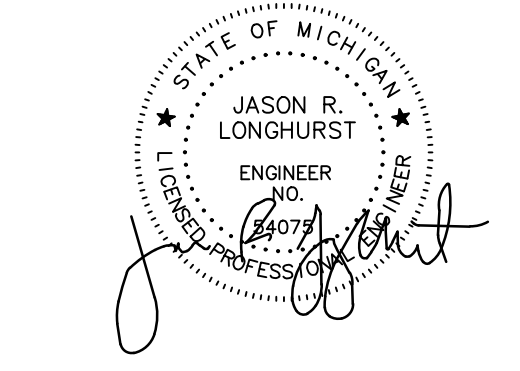
LEGEND	
	MANHOLE
	HYDRANT
	MANHOLE CATCH BASIN
	UTILITY POLE
	GUY WIRE
	C.O.
	HYDRANT GATE VALVE
	INLET
	MANHOLE C.B.
	LIGHT POLE
	SIGN
	EXISTING GAS MAIN
	PR. SANITARY SEWER
	PR. WATER MAIN
	PR. STORM SEWER
	PR. R. Y. CATCH BASIN
	SAND BACKFILL (95% DENSITY)
	PROPOSED LIGHT POLE
	EXISTING SANITARY SEWER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

RIGHT-OF-WAY DRAINAGE NOTE
THIS PROPERTY HISTORICALLY RECEIVES DRAINAGE FROM THE RIGHT-OF-WAY OF HAGGERTY ROAD WHICH DRAINS ACROSS THE PROPERTY TO THE OUTLET AT THE DRAIN ON THE WEST SIDE OF THE PROPERTY. LITHIA TO PROVIDE AN EASEMENT FOR THE RIGHT-OF-WAY DRAINAGE ACROSS THE PROPERTY.

STORM WATER MANAGEMENT NOTE
THE EXISTING SITE PROVIDED DETENTION FOR A 10-YEAR STORM EVENT WITH A CONTROLLED OUTLET RATE OF 0.2 CFS PER ACRE. THE PREVIOUS DEVELOPMENTS STORM WATER MANAGEMENT WAS PROVIDED BY THREE SEPARATE SYSTEMS. AN AREA OF 0.26 ACRES OF RIGHT-OF-WAY DRAINAGE DRAINS THROUGH THE STORM NETWORK ON SITE. THE NETWORK FOR THE PROPERTY DISCHARGES TO THE INGERSOLL CREEK (TOWNLINER DRAIN) DRAIN.

THE PROPOSED STORMWATER MANAGEMENT SYSTEM PROVIDES DETENTION FOR A 100-YEAR STORM EVENT FOR THE PORSCHE PORTION OF THE PROPERTY. STORMWATER WILL BE ROUTED THROUGH TWO MECHANICAL PRETREATMENT STRUCTURES AND AN ISOLATOR ROW IN THE DETENTION SYSTEM. STORAGE WILL BE PROVIDED BY AN UNDERGROUND DETENTION SYSTEM OF STORM TECH CHAMBERS WITH STONE STORAGE. OUTLET WILL BE CONTROLLED BY AN OUTLET CONTROL STRUCTURE WITH A WEIR PLATE CONNECTED TO THE EXISTING OUTLET PIPE. THE ROW DRAINAGE AREA WILL BE CONSIDERED PASS THROUGH FLOW.

SEAL



PROJECT
Lithia Motors, Inc.
Porsche of Novi

CLIENT
Lithia Motors, Inc.
150 N. Bartlett Street
Medford, OR 97501

Contact:
Ms. Anne Breck
Tel: (541) 734-3043
email: abreck@lithia.com

PROJECT LOCATION
Part of the Southeast 1/4 of
Section 23, Town 1 North,
Range 8 East, City of Novi,
Oakland County, Michigan

SHEET
Storm Water Management
Plan



DATE ISSUED/REVISED
2022-11-17 PRELIMINARY SITE PLAN REVIEW
2023-01-13 REV. PER PRELIM. SITE PLAN REVIEW

DRAWN BY:
T. Wood
DESIGNED BY:
T. Wood
APPROVED BY:
J. Longhurst

DATE:
November 17, 2022

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

NFE JOB NO. SHEET NO.
1921-05 C5

Novi Storm Water Detention Calculations - 100 Year Storm

Determine Volume Required for Porsche of Novi Redevelopment

Determine Site Runoff Coefficient:

Proposed Land Use	Runoff Coefficient	Drainage Area	Acres
Pavement	0.95	1.07	
Building	0.95	0.44	
Landscaping / Open Space	0.35	0.33	
Detention Basin	1.00	0.00	
Total Area:		1.84	Acres

Weighted Runoff Coefficient "C" Factor = **0.843**

Detention Calculation - City of Novi Method (100 Year Storm Event - With Outlet (Office))

Contributing Acreage:	1.84 Acres
Allowable Outflow Q ₀ = 0.157 A	0.290 CFS / Acre
Runoff Coefficient, C:	0.843 Imperviousness
Maximum Allowable Outflow, Q ₀ = Q _a (As/C)	0.178 CFS / (Acre * Imperv)
T Storage Time (100 Year): T ₁₀₀ = 25 * sqrt(10312.5 / Q ₀)	218.743 Minutes
V Storage Volume (100 Year): V _s = 16500 * T ₁₀₀ * (1 + 0.0001 * T ₁₀₀)	13,251.04 CF / (Acre * Imperv)
V ₁ Total Volume (100 Year): V ₁ = V _s + V ₀ AsC	20,554.21 Cubic Feet
Volume Provided:	23,246.80 Cubic Feet

ADS Stormtech Chambers MC3500

12" of stone above chambers, 9" below chambers, 6" stone perimeter, 6" stone between chambers

Storage Provided by 1 Chamber Bare	109.90 Cubic Feet
Volume of stone per 1 Chamber	162.00 Cubic Feet
Porosity	0.40
Assume 15% of stone void space will be filled with sediment	0.85
Storage Provided by 1 chamber	164.98 Cubic Feet
Storage Provided by 1 End Cap Bare	14.00 Cubic Feet
Volume of stone per 1 End Cap	75.60 Cubic Feet
Porosity	0.40
Assume 15% of stone void space will be filled with sediment	0.85
Storage Provided by 1 End Cap	40.60 Cubic Feet
Number of Chambers Proposed	135
Number of End Caps Proposed	24
Total Volume Proposed	23,246.80 Cubic Feet

Pretreatment Flow Rate PT1 (1 Year Storm Event)

Contributing Acreage:	0.86 Acres
Runoff Coefficient, C:	0.810 Imperviousness
I (1 year) = 72(Tc+25)	2,616 Inches/Hour
Tc = Tc sheet flow + Tc pipe flow	2,520 Minutes
Tc Sheet Flow = L * 0.485 * SQRT(S * 0.660)	1.20 Minutes
Tc Pipe Flow from Storm Calcs	1.32 Minutes
Q - CIA	1.82 CFS
Required 10 Year Bypass rate from storm calcs	3.30 CFS
Proposed Mechanical Pretreatment Structure ADA Barracuda Max 55	
NIDEP Treatment Hourate TSS removal rate 50%	2.37 CFS

Pretreatment Flow Rate PT2 (1 Year Storm Event)

Contributing Acreage:	0.89 Acres
Runoff Coefficient, C:	0.820 Imperviousness
I (1 year) = 72(Tc+25)	2,675 Inches/Hour
Tc = Tc sheet flow + Tc pipe flow	1,920 Minutes
Tc Sheet Flow = L * 0.485 * SQRT(S * 0.660)	0.72 Minutes
Tc Pipe Flow from Storm Calcs	1.20 Minutes
Q - CIA	2.17 CFS
Required 10 Year Bypass rate from storm calcs	3.06 CFS
Proposed Mechanical Pretreatment Structure ADA Barracuda Max 55	
NIDEP Treatment Hourate TSS removal rate 50%	2.37 CFS

Formula: Bank Full Volume, V_{bf} = 5160 x A x C

Contributing Acreage:	1.840 Acres
Runoff Coefficient, C:	0.843 Imperviousness
Volume V _{bf} Required: V _{bf} = 5160 x A x C	8,094 Cubic Feet

Outlet Control Structure ROW Pass Through Flow

Q_{row} (from Sutter, Keast & Associates 90-103 plans dated October 1991) = **0.59 CFS**

Determine Outlet for ROW pass through Flow

Ztop of pipe	853.61
Zoutlet	852.10
Head h _{avg} (Ztop - Zout)	1.51 Feet
Required Outlet Size, A: A _{out} = Q _{row} / (0.62 x sqrt(2 x g x h _{avg}))	0.0965 Square Feet
Area of 4" Diameter Hole:	0.0872 Square Feet
Provided No. OF 4" Diameter Holes:	1 Hole(s) at 852.10
Actual Average Release Rate: Q _{avg} (a) = 0.62 x A _{out} x sqrt(2 x g x h _{avg})	0.53 CFS

Determine Outlet for Onsite Outlet Control

Determine Outlet for Bank Full Flood

Required Max Average Release Rate: Q _{avg} (b) = V _{bf} / (T ₁₀₀ x 3600) (24 hours)	0.09 CFS
Required Min Average Release Rate: Q _{avg} (c) = V _{bf} / (T ₁₀₀ x 14400) (40 hours)	0.06 CFS
ZM (from storage chart)	853.89
Zoutlet	852.10
Average Head h _{avg} (ZM - Zout)	0.89 Feet
Required Outlet Size, A: A _{out} = Q _{avg} / (0.62 x sqrt(2 x g x h _{avg}))	0.0118 Square Feet
Area of 1.5" Diameter Hole:	0.01227 Square Feet
Provided No. OF 1.5" Diameter Holes:	1 Hole(s) at 852.10
Actual Average Release Rate: Q _{avg} (a) = 0.62 x A _{out} x sqrt(2 x g x h _{avg})	0.06 CFS
Actual Holding Time: T ₁₀₀ = V _{bf} / (Q _{avg} x 3600)	38.51 Hours

Determine Outlet for 100 Year Flood

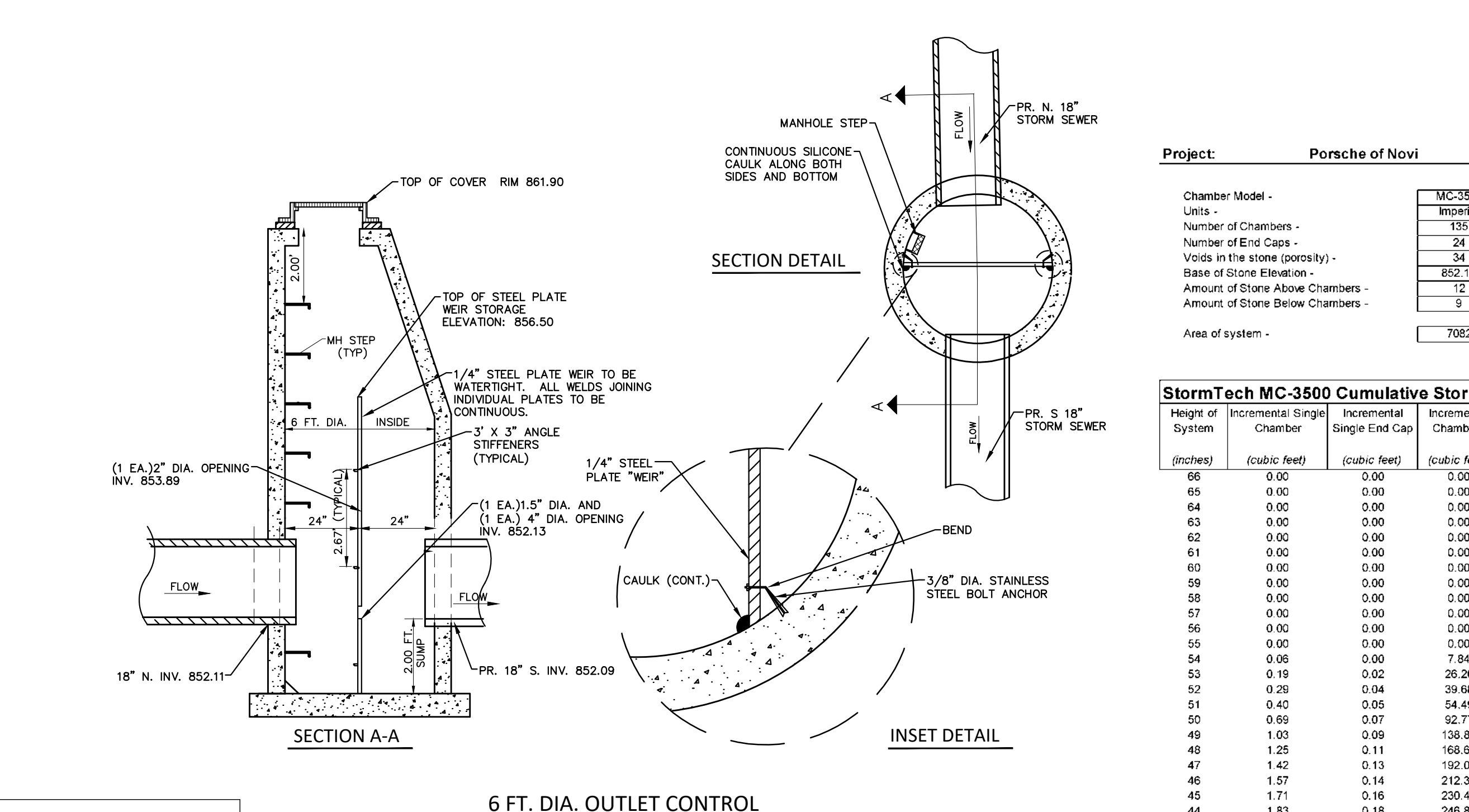
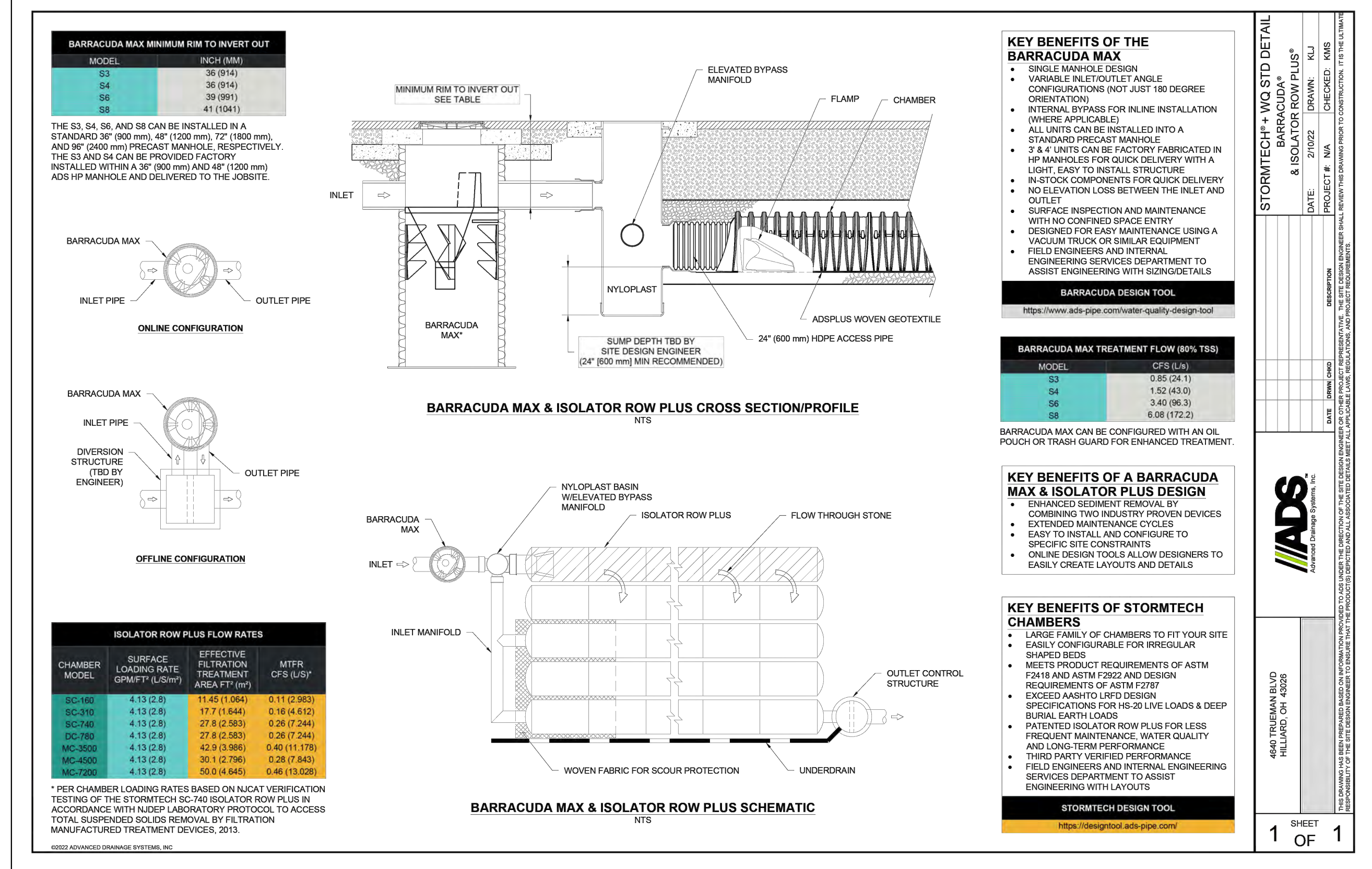
Allowable Outflow, Q ₀	0.28 CFS
Z100 (from storage chart)	856.50
ZM (from storage chart)	853.89
Zoutlet	852.10
Calculate Bank Full Hole Contribution	
Max Head h _{avg} (Z100 - Zout)	2.20 Feet
Max Release Rate: Q _{avg} = 0.62 x A _{out} x sqrt(2 x g x h _{avg})	0.0905 CFS
Q _{avg} (b) is less than Q _{avg} (a) therefore additional holes are required at Z100	
Adjusted Discharge	0.185 CFS
Max Head h _{avg} (Z100 - Z16)	2.61 Feet
Area: A _{out} = Q _{avg} / (0.62 x sqrt(2 x g x h _{avg}))	0.0231 Square Feet
Area of 2" Diameter Hole:	0.02180 Square Feet
Provided No. OF 2" Diameter Holes:	1 Hole(s) at 853.89
Actual Area of Outlet Hole(s): Actual:	0.0218 Square Feet
Actual Average Release Rate: Q _{avg} (a)	0.27 CFS

Surface Type	Runoff Coefficient	Drainage Area								Sub Total
		A	B	C	D	E	F	G	H	Excluding ROW
Impervious Areas (Acres)	0.95	0.11	0.21	0.08	0.25	0.12	0.25	0.10	0.29	
Pond Area (Acres)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pervious Area (Acres)	0.35	0.10	0.00	0.02	0.08	0.09	0.00	0.03	0.11	0.43
Total Area (Acres)		0.21	0.21	0.11	0.33	0.21	0.26	0.13	0.39	1.84
Weighted C Factor		0.68	0.95	0.82	0.80	0.70	0.95	0.82	0.79	0.81

Novi, Oakland County Storm Sewer Calculations

Project No: 1921-05
Project Name: Porsche of Novi
Location: Novi
Dated: 1/6/2023
Revised:

Drainage Area	From Structure	To Structure	Drainage Area (Acres)	Runoff Coefficient (C)	Equivalent Area (C * A)	Total Area (Sum C * A)	Time of Concentration (Minutes)	Rainfall Intensity (Inches/Hr.)	Actual Discharge (CFS)	Pipe Size (Inches)	Pipe Slope (%)	Pipe Length (Feet)	Flow Velocity (Rt/Sec)	Full Pipe Capacity (CFS)	Full Pipe H. G. Elev. (Feet)	Lower End H. G. Elev. (Feet)	H. G. Slope (%)	Theoretical Velocity (Upper)	Rim Elevation (Feet)	Invert Elevation (Feet)	Change in Elev. (Feet)	Invert Elev. (Feet)	Lower End Invert Elev. (Feet)	COVER (Feet)	RIM TO HG (Feet)	
A	7	6	0.21	0.68	0.143	0.143	20.00	3.89	0.56	12	0.35	23	2.68	0.14	2.11	859.06	859.05	0.02	0.71	862.65	0.08	858.33	858.25	3.15	3.59	
ROW	EX	6	0.26	0.68	0.177	0.177	20.00	3.89	0.69	12	0.35	70	8.80	0.13	6.91	859.06	856.56	0.04	0.88	866.96	2.63	859.06	856.43	6.73	7.90	
		6	5			0.320	20.14	3.88	1.24	12	0.35	104	2.68	0.64	2.11	856.56	856.44	0.12	1.58	862.95	0.36	856.34	855.97	5.45	6.39	
B	ROOF	5	0.21	0.95	0.200	0.200	20.00	3.89	0.78	8	1.00	29	3.75	0.13	1.31	860.06	859.96	0.35	2.22	864.00	0.29	859.72	859.43	3.45	3.94	
		5	3	0.11	0.82	0.090	0.609	20.78	3.82	2.33	12	0.45	130	3.04	0.71	2.39	856.44	855.88	0.43	2.97	862.30	0.58	855.87	855.29	5.26	5.86
D	4	3	0.33	0.80	0.264	0.264	20.00	3.89	1.03	12	0.35	76	2.66	0.48	2.09	855.95	855.88	0.08	1.31	861.15	0.26	856.91	856.65	6.07	5.20	
		3	PT1			0.873	21.50	3.76	3.29	12	0.86	35	4.21	0.14	3.30	855.88	855.58	0.85	4.19	863.05	0.30	855.19	854.89	6.69	7.17	
		PT1	2			0.873	21.64	3.75	3.28	12	0.86	10	4.21	0.04	3.30	855.58	855.50	0.85	4.17	863.00	0.09	854.79	854.70	7.05	7.42	
E	12	11	0.21	0.70	0.147	0.147	20.00	3.89	0.57	12	0.35	139	2.66	0.87	2.09	858.91	858.87	0.03	0.73	862.80	0.48	858.55	858.07	3.08	3.89	
F	ROOF	11	0.26	0.95	0.247	0.247	20.00	3.89	0.96	8	1.00	26	3.75	0.12	1.31	860.11	859.96	0.54	2.75	864.00	0.26	859.70	859.43	3.46	3.89	
G	11	9	0.13	0.82	0.107	0.501	20.87	3.82	1.91	12	0.60	69	3.51	0.33	2.76	857.96	857.76	0.29	2.43	863.20	0.41	857.52	857.11	4.51	5.24	
		10	0.39	0.79	0.308	0.308	20.00	3.89	1.20	12	0.35	55	2.66	0.34	2.09	857.82	857.76	0.11	1.53	861.50	0.19	857.30	857.11	3.03	3.68	
		9	PT2			0.809	21.20	3.79	3.06	12	0.60	27	3.51	0.13	2.76	857.76	857.56	0.74	3.90	863.00	0.16	857.01	856.85	4.82	5.24	
		PT2	8			0.809	21.32	3.78	3.06	12	0.60	10	3.51	0.05	2.76	857.56	857.49	0.74	3.89	863.20	0.06	856.75	856.69	5.28	5.64	
OC1	1	RESTRICTED OUTLET	1.682			21.64	3.75	6.31	18	0.35	26	3.52	0.12	6.21	853.29	853.20	0.36	3.57	861.90	0.09	852.09	852.00	8.14	8.61		



KEY BENEFITS OF THE BARRACUDA MAX

- SINGLE MANHOLE DESIGN
- VARIABLE INLET/OUTLET ANGLE
- CONSIDERATIONS (NOT JUST 180 DEGREE ORIENTATION)
- INTERNAL BYPASS FOR INLINE INSTALLATION (APPLICABLE)
- ALL UNITS CAN BE INSTALLED INTO A STANDARD PRECAST MANHOLE
- 7 & 8 UNITS CAN BE FACTORY FABRICATED IN 8" MANHOLES FOR QUICK DELIVERY WITH A LIGHT, EASY TO INSTALL STRUCTURE
- IN STOCK COMPONENTS FOR QUICK DELIVERY
- NO ELEVATION LOSS BETWEEN THE INLET AND OUTLET
- SURFACE INSPECTION AND MAINTENANCE WITH NO CONFINED SPACE ENTRY
- DESIGNED FOR EASY MAINTENANCE USING A VACUUM TRUCK OR SIMILAR EQUIPMENT
- FIELD ENGINEERS AND INTERNAL ENGINEERING SERVICES DEPARTMENT TO ASSIST ENGINEERING WITH SCENARIOS

BARRACUDA DESIGN TOOL
<https://www.ads.com/interior-quality-design-tool>

MODEL	CFS (US)
53	0.85 (24.1)
54	1.82 (43.0)
56	3.40 (96.3)
58	6.08 (172.2)

KEY BENEFITS OF A BARRACUDA MAX & ISOLATOR PLUS DESIGN

- ENHANCED SEDIMENT REMOVAL BY COMBINING TWO INDUSTRY PROVEN DEVICES
- EXTENDED MAINTENANCE CYCLES
- EASY TO INSTALL AND CONFORM TO SPECIFIC SITE CONSTRAINTS
- ONLINE DESIGN TOOL ALLOW DESIGNERS TO EASILY CREATE LAYOUTS AND DETAILS

KEY BENEFITS OF STORMTECH CHAMBERS

- LARGE FAMILY OF CHAMBERS TO FIT YOUR SITE
- EASILY CONFIGURABLE FOR IRREGULAR SHAPED BEDS
- MEETS PRODUCT REQUIREMENTS OF ASTM F2418 AND ASTM F2922 AND DESIGN REQUIREMENTS OF ASTM F2777
- EXCEEDED ASHITO LIRD DESIGN SPECIFICATIONS FOR HIGH LIVE LOADS & DEEP BURIAL EARTH LOADS
- PATENTED ISOLATOR ROW PLUS FOR LESS FREQUENT MAINTENANCE, WATER QUALITY AND LONG TERM PERFORMANCE
- THIRD PARTY VERIFIED PERFORMANCE
- FIELD ENGINEERS AND INTERNAL ENGINEERING SERVICES DEPARTMENT TO ASSIST ENGINEERING WITH LAYOUTS

STORMTECH DESIGN TOOL
<https://stormtech.ads.com/>

STORMTECH + WQ STD DETAIL

BARRACUDA MAX
BARRACUDA PLUS
ISOLATOR ROW PLUS
STORMTECH CHAMBERS

DATE: 2/10/23
PROJECT # : NA
CHECKED: NBS
DESIGNED: NBS

4600 TRILEAN BLVD
HILLIARD, OH 43026

1 OF 1

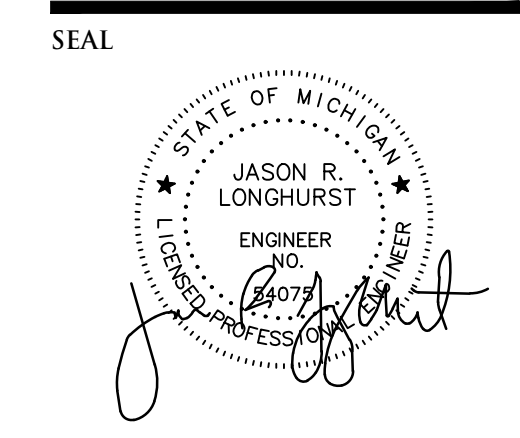
Project: Porsche of Novi

Chamber Model	MC-3500
Units	135
Number of Chambers	135
Number of End Caps	24
Voices in the stone (porosity)	852.13 ft
Base of Stone Elevation	12 ft
Amount of Stone Above Chambers	9 ft
Amount of Stone Below Chambers	

Area of system = 7082 sq Min Area - 7082 sq min area

StormTech MC-3500 Cumulative Storage Volumes

Incremental Single Chamber (cubic feet)	Incremental Single End Cap (cubic feet)	Incremental Chambers (cubic feet)	Incremental End Cap (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch. E.C and Stone (cubic feet)	Cumulative System (cubic feet)	Elevation (feet)
66	0.00	0.00	0.00	200.66	200.66	23276.54	857.63
65	0.00	0.00	0.00	200.66	200.66	23075.88	857.55
64	0.00	0.00	0.00	200.66	200.66	22875.22	857.48
63	0.00	0.00	0.00	200.66	200.66	22674.57	857.38
62	0.00	0.00	0.00	200.66	200.66	22473.91	857.30
61	0.00	0.00	0.00	200.66	200.66	22273.25	857.21
60	0.00	0.00	0.00	200.66	200.66	22072.60	857.13
59	0.00	0.00	0.00	200.66	200.66	21871.94	857.05
58	0.00	0.00	0.00	200.66	200.66	21671.28	856.9



PROJECT
 Lithia Motors, Inc.
 Porsche of Novi

CLIENT
 Lithia Motors, Inc.
 150 N. Bartlett Street
 Medford, OR 97501

Contact:
 Ms. Anne Breck
 Tel: (541) 734-3043
 email: abreck@lithia.com

PROJECT LOCATION
 Part of the Southeast 1/4 of
 Section 23, Town 1 North,
 Range 8 East, City of Novi,
 Oakland County, Michigan

SHEET
 Storm Sewer Profiles

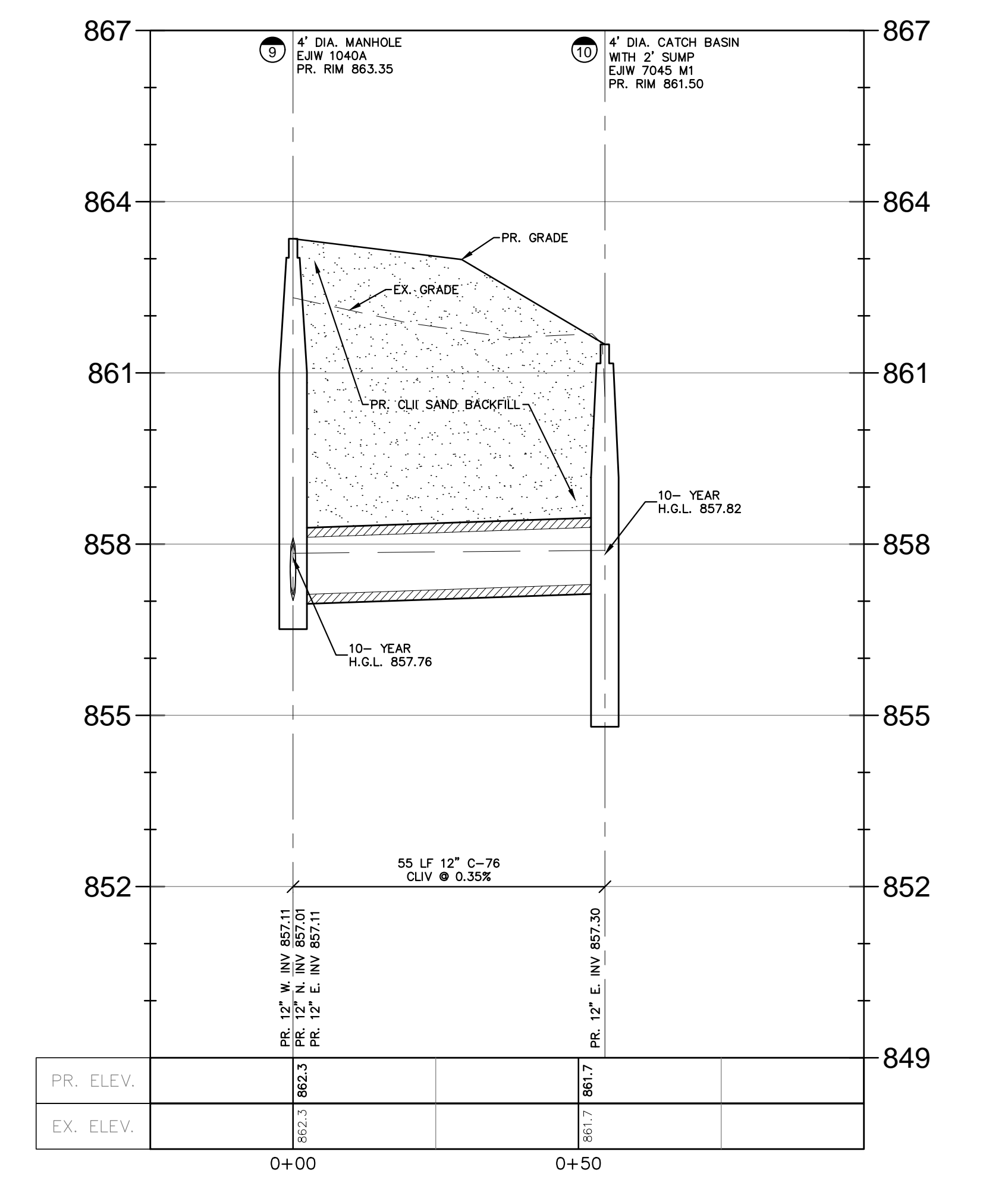
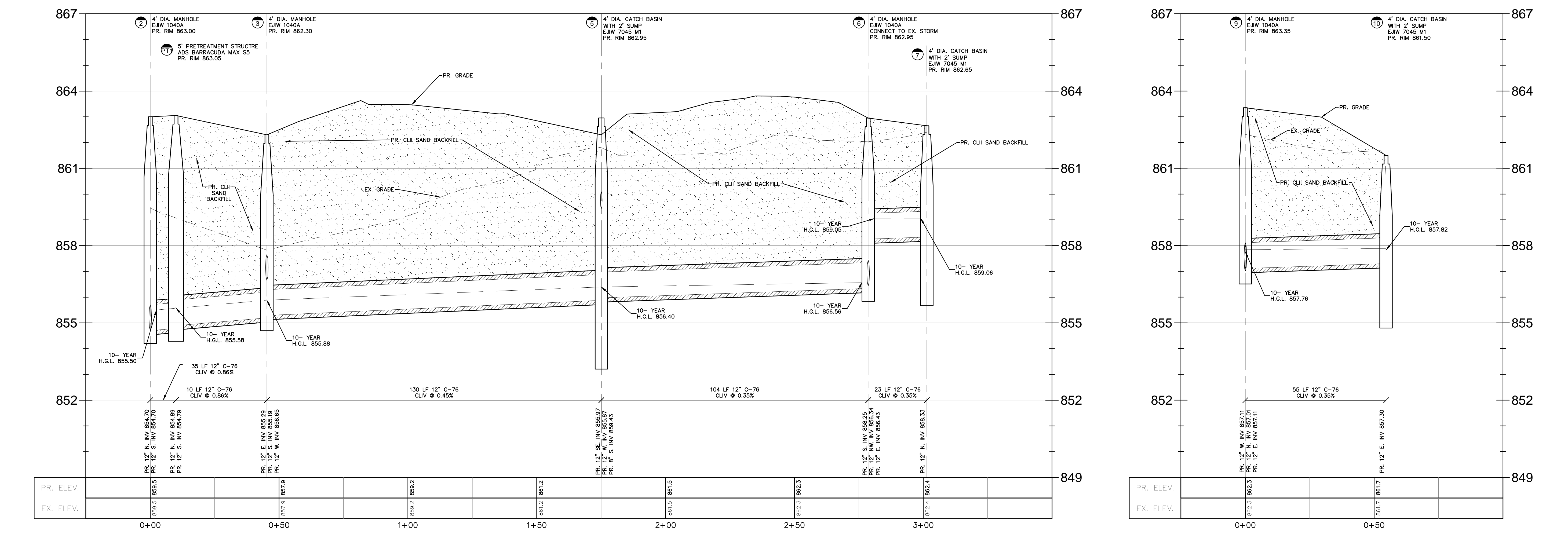
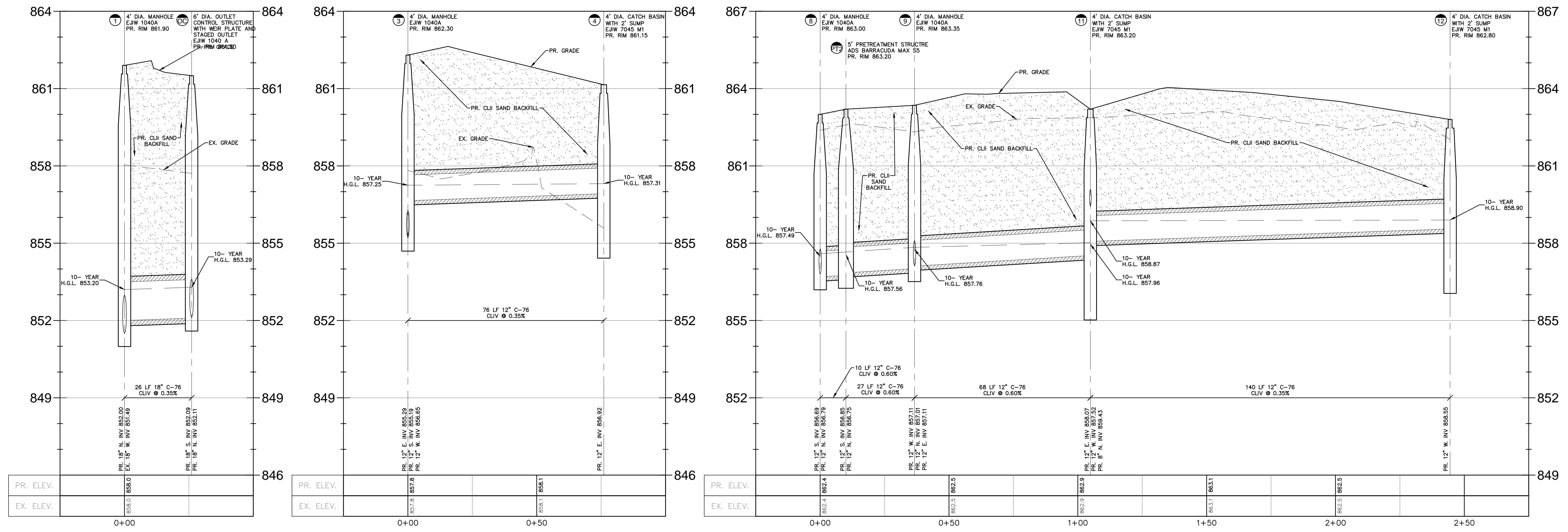


DATE ISSUED/REVISED
 2022-11-17 PRELIMINARY SITE PLAN REVIEW
 2023-01-13 REV. PER PRELIM. SITE PLAN REVIEW

DRAWN BY:
 B. Girschach
 DESIGNED BY:
 T. Wood
 APPROVED BY:
 J. Longhurst
 DATE:
 November 17, 2022

SCALE: 1" = 20' / 1" = 2'

NFE JOB NO. SHEET NO.
1921-05 C7

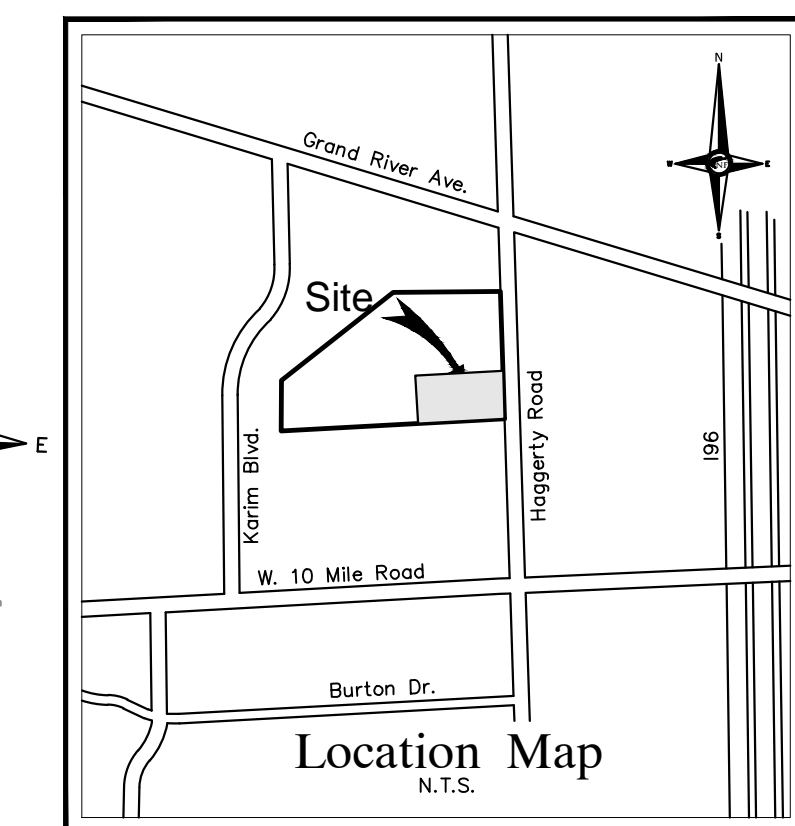
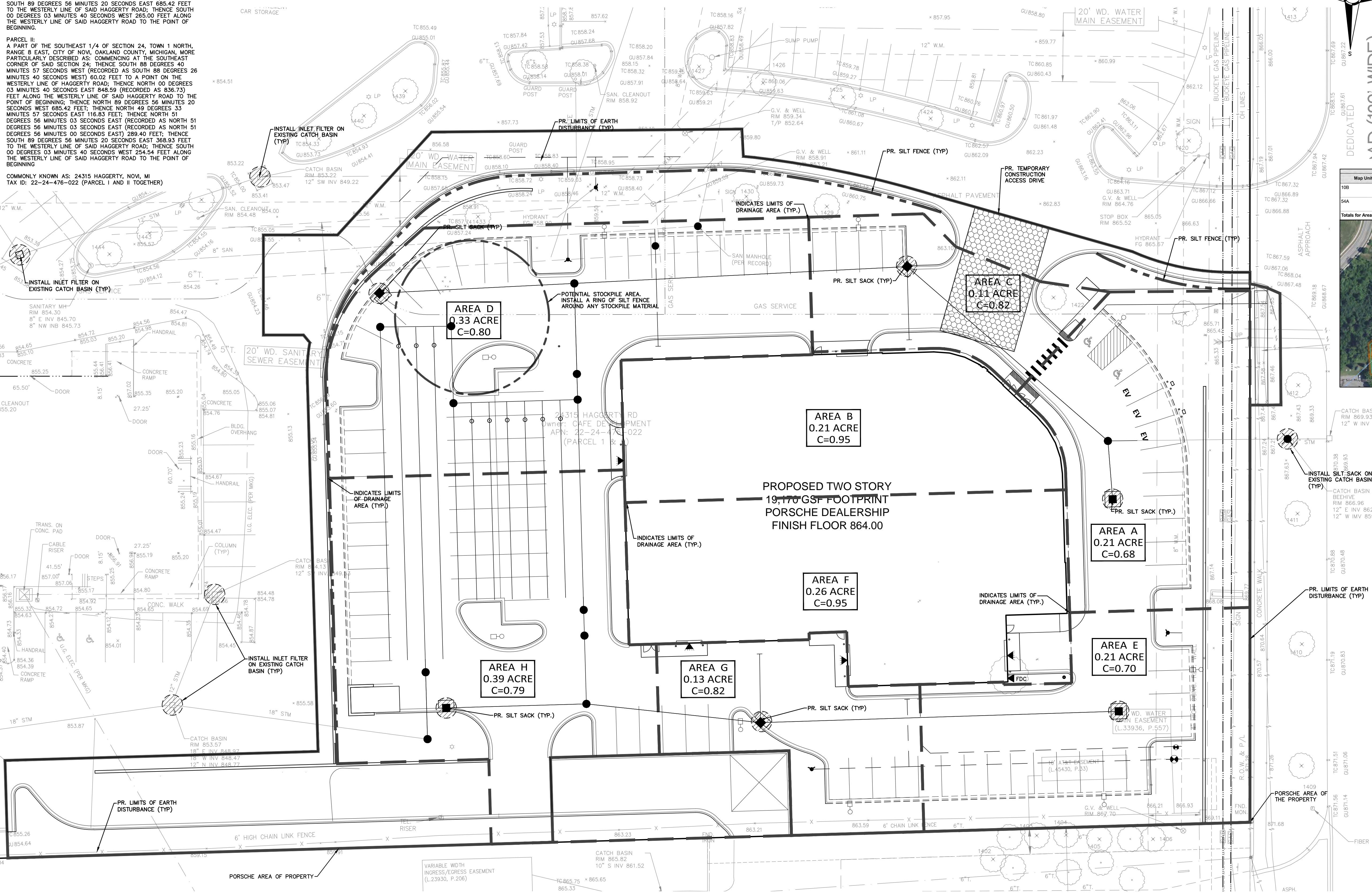


LEGAL DESCRIPTION
 LAND SITUATED IN THE STATE OF MICHIGAN, COUNTY OF OAKLAND,
 CITY OF NOVI, AS DESCRIBED AS:

PARCEL I:
 A PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 1 NORTH,
 RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE
 PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST
 CORNER OF SAID SECTION 24; THENCE SOUTH 88 DEGREES 40
 MINUTES 57 SECONDS WEST (RECORDED AS SOUTH 88 DEGREES 26
 MINUTES 40 SECONDS WEST) 60.02 FEET TO A POINT ON THE
 WESTERLY LINE OF HAGGERTY ROAD; THENCE NORTH 00 DEGREES
 03 MINUTES 40 SECONDS EAST 583.59 (RECORDED AS 571.73)
 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE
 POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 26 MINUTES 40
 SECONDS WEST 800.00 FEET; THENCE NORTH 00 DEGREES 03
 MINUTES 40 SECONDS EAST 190.00 FEET; THENCE NORTH 49
 DEGREES 53 MINUTES 57 SECONDS EAST 150.25 FEET; THENCE
 SOUTH 89 DEGREES 56 MINUTES 20 SECONDS EAST 685.42 FEET
 TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE SOUTH
 00 DEGREES 03 MINUTES 40 SECONDS WEST 265.00 FEET ALONG
 THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF
 BEGINNING.

PARCEL II:
 A PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 1 NORTH,
 RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE
 PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST
 CORNER OF SAID SECTION 24; THENCE SOUTH 88 DEGREES 40
 MINUTES 57 SECONDS WEST (RECORDED AS SOUTH 88 DEGREES 26
 MINUTES 40 SECONDS WEST) 60.02 FEET TO A POINT ON THE
 WESTERLY LINE OF HAGGERTY ROAD; THENCE NORTH 00 DEGREES
 03 MINUTES 40 SECONDS EAST 848.59 (RECORDED AS 836.73)
 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE
 POINT OF BEGINNING; THENCE SOUTH 89 DEGREES 56 MINUTES 20
 SECONDS WEST 685.42 FEET; THENCE NORTH 49 DEGREES 53
 MINUTES 57 SECONDS EAST 116.83 FEET; THENCE NORTH 51
 DEGREES 56 MINUTES 03 SECONDS EAST (RECORDED AS NORTH 51
 DEGREES 56 MINUTES 03 SECONDS EAST) 290.40 FEET; THENCE
 SOUTH 89 DEGREES 56 MINUTES 20 SECONDS EAST 368.93 FEET
 TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE SOUTH
 00 DEGREES 03 MINUTES 40 SECONDS WEST 244.54 FEET ALONG
 THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF
 BEGINNING.

COMMONLY KNOWN AS: 24315 HAGGERTY, NOVI, MI
 TAX ID: 22-24-476-022 (PARCEL I AND II TOGETHER)

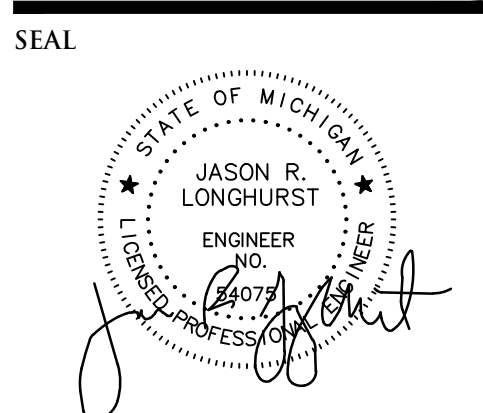


Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
10B	Marlette sandy loam, 1 to 6 percent slopes	6.2	81.8%
54A	Marlette sandy loam, 0 to 3 percent slopes	1.4	18.2%
Totals for Area of Interest		7.6	100.0%



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



PROJECT
 Lithia Motors, Inc.
 Porsche of Novi

CLIENT
 Lithia Motors, Inc.
 150 N. Bartlett Street
 Medford, OR 97501

Contact:
 Ms. Anne Breck
 Tel: (541) 734-3043
 email: abreck@lithia.com

PROJECT LOCATION
 Part of the Southeast 1/4 of
 Section 23, Town 1 North,
 Range 8 East, City of Novi,
 Oakland County, Michigan

SHEET
 Soil Erosion Control and
 Drainage Area Plan



DATE ISSUED/REVISED
 2022-11-17 PRELIMINARY SITE PLAN REVIEW
 2023-01-13 REV. PER PRELIM. SITE PLAN REVIEW

DRAWN BY:
 B. Girbach
DESIGNED BY:
 T. Wood
APPROVED BY:
 J. Longhurst

DATE:
 November 17, 2022

SCALE: 1" = 20'

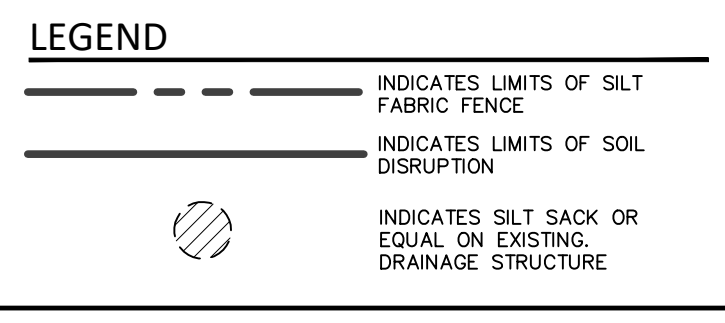
NFE JOB NO. 1921-05 **SHEET NO.** C8

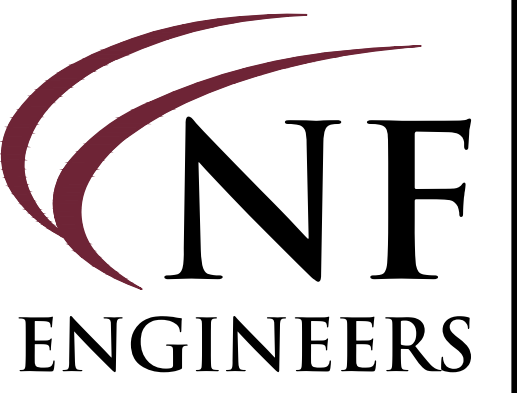
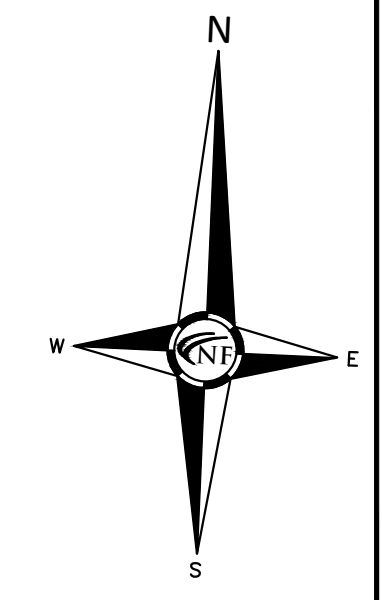
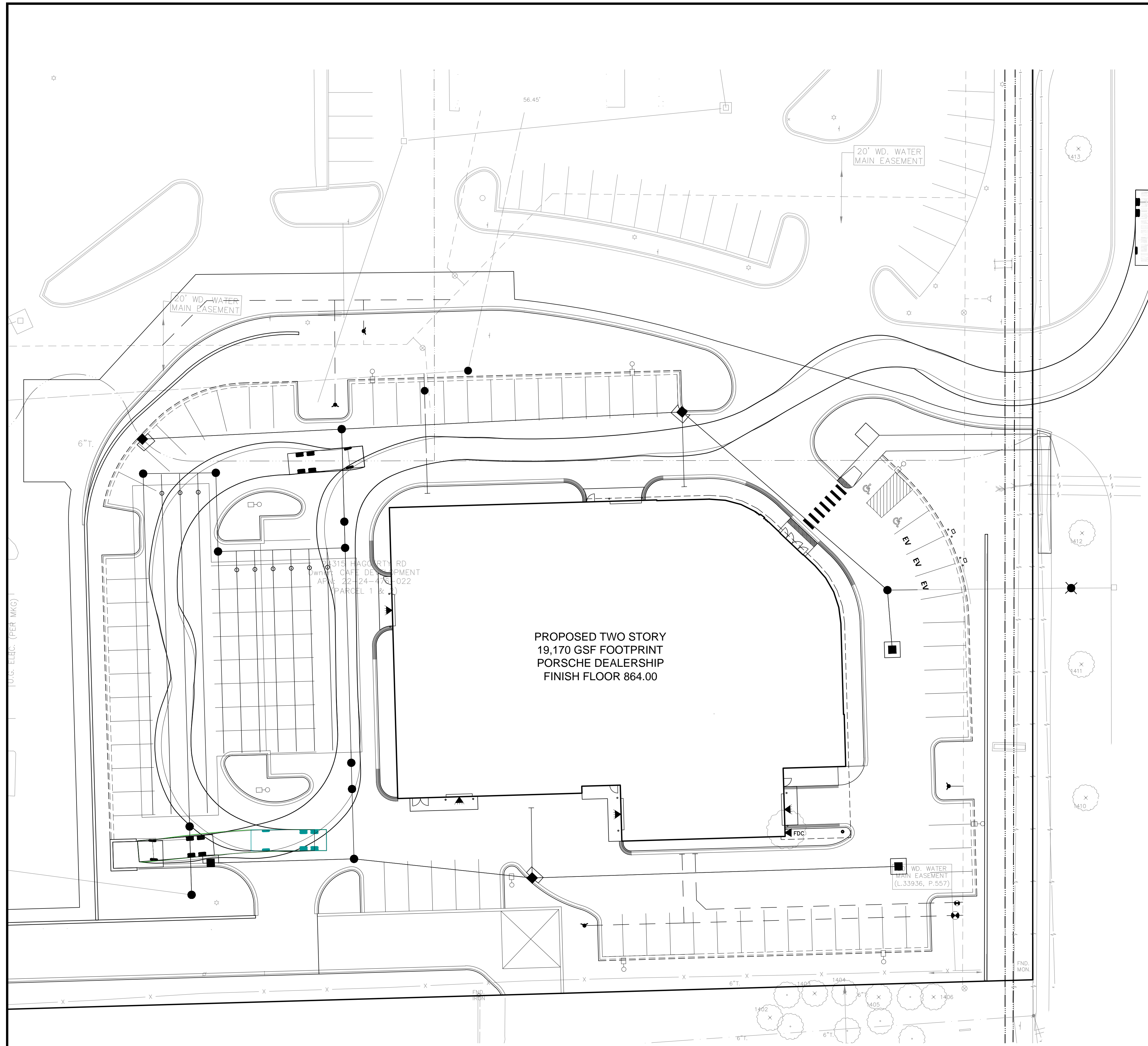
NOTES
 A DISTANCE OF 300 FEET TO THE NEAREST BODY OF WATER
 INGERSOLL CREEK (TOWNLINER DRAIN).
 THE TOTAL AREA OF EARTH DISRUPTION IS 2.19 ACRES.
 THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND
 AFTER EVERY STORM EVENT BY THE CONTRACTOR
 A SOIL EROSION PERMIT IS REQUIRED FROM THE CITY OF NOVI.

CITY OF NOVI SESC NOTES
 IF DEWATERING IS ANTICIPATED OR ENCOUNTERED DURING CONSTRUCTION A DEWATERING PLAN MUST BE SUBMITTED TO THE
 ENGINEERING DIVISION FOR REVIEW.
 IT IS THE DEVELOPER'S RESPONSIBILITY TO GRADE AND STABILIZE DISTURBANCES DUE TO THE INSTALLATION OF PUBLIC UTILITIES.
 THE STORM WATER DETENTION BASIN SHALL BE STABILIZED PRIOR TO DIRECTING FLOW TO THE BASIN.
 CONTRACTOR SHALL PROVIDE STREET SWEEPING AND DUST CONTROL AS REQUIRED TO KEEP ROADS FREE OF DEBRIS OR AS
 DIRECTED BY CITY INSPECTOR.
 SLOPES STEEPER THAN 1V:6H (16%) SHALL BE STABILIZED WITH EROSION CONTROL BLANKET.
 INSTALLATION OF SILT FENCING OR TREE PROTECTION FENCING SHALL NOT OCCUR PRIOR TO THE INITIAL CITY PRE-CONSTRUCTION
 MEETING. WHEN NATURAL FEATURES EXIST ON THE SITE, INSPECTION OF STAKING MAY BE REQUIRED PRIOR TO INSTALLATION OF
 THE FENCING.
 ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOVI STANDARDS AND SPECIFICATIONS

CONSTRUCTION SEQUENCE / TIMING SCHEDULE

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

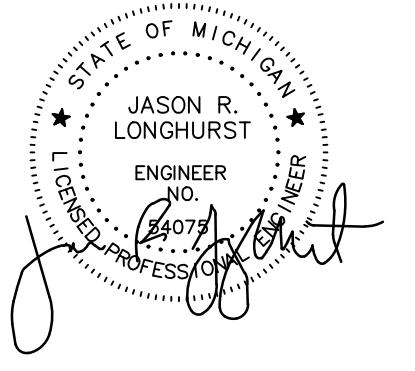




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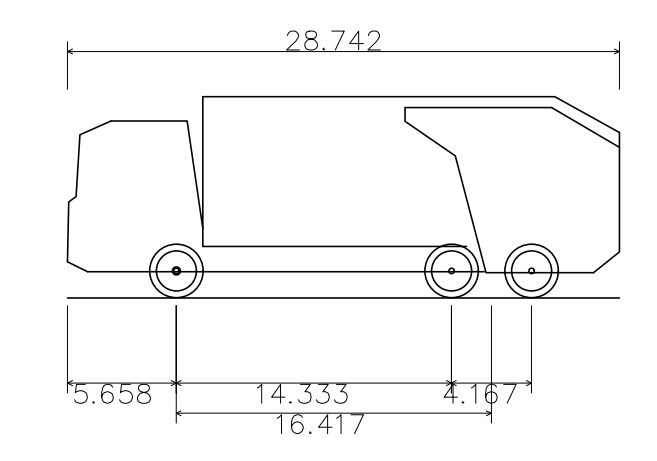
PROJECT
Lithia Motors, Inc.
Porsche of Novi

CLIENT
Lithia Motors, Inc.
150 N. Bartlett Street
Medford, OR 97501

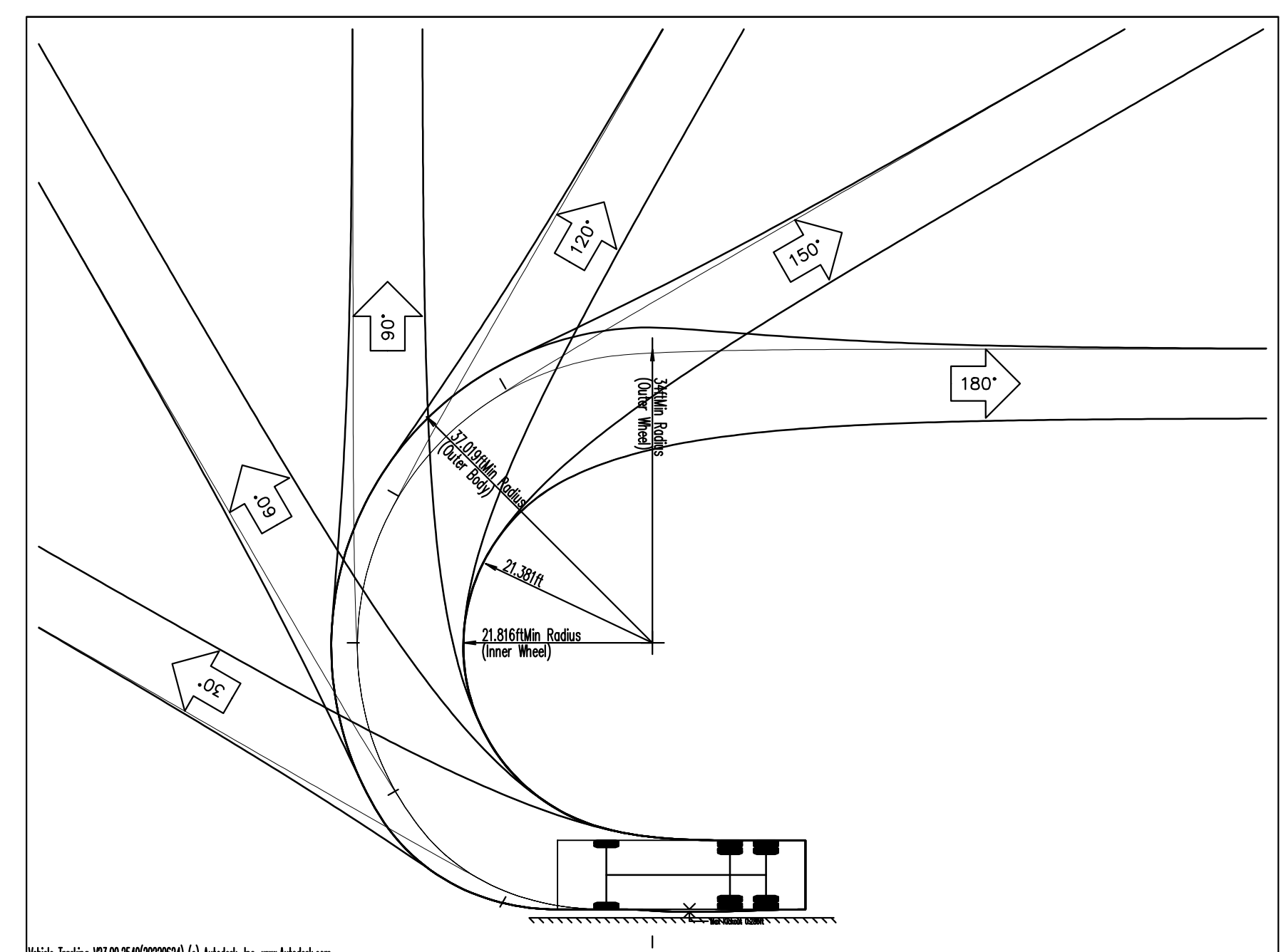
Contact:
Ms. Anne Breck
Tel: (541) 734-3043
email: abreck@lithia.com

PROJECT LOCATION
Part of the Southeast 1/4 of
Section 23, Town 1 North,
Range 8 East, City of Novi,
Oakland County, Michigan

SHEET
Truck Maneuvering Plan



Mack TerraPro Low Entry 6x4 LEU 613 + Wayne Phoenix III 25Yd
Overall Length 28.742ft
Overall Width 8.000ft
Overall Body Height 10.481ft
Min Body Ground Clearance 1.311ft
Track Width 8.000ft
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 34.000ft



Vehicle Tracking: 03.00.2542(202204) © Autodesk, Inc. www.Autodesk.com
Metric: (turn(s) based upon a design speed of 5.00mph.

Mack TerraPro Low Entry 6x4 LEU
613 + Wayne Phoenix III 25Yd



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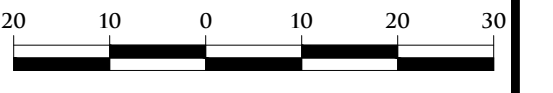
DRAWN BY:
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DESIGNED BY:
T. Wood

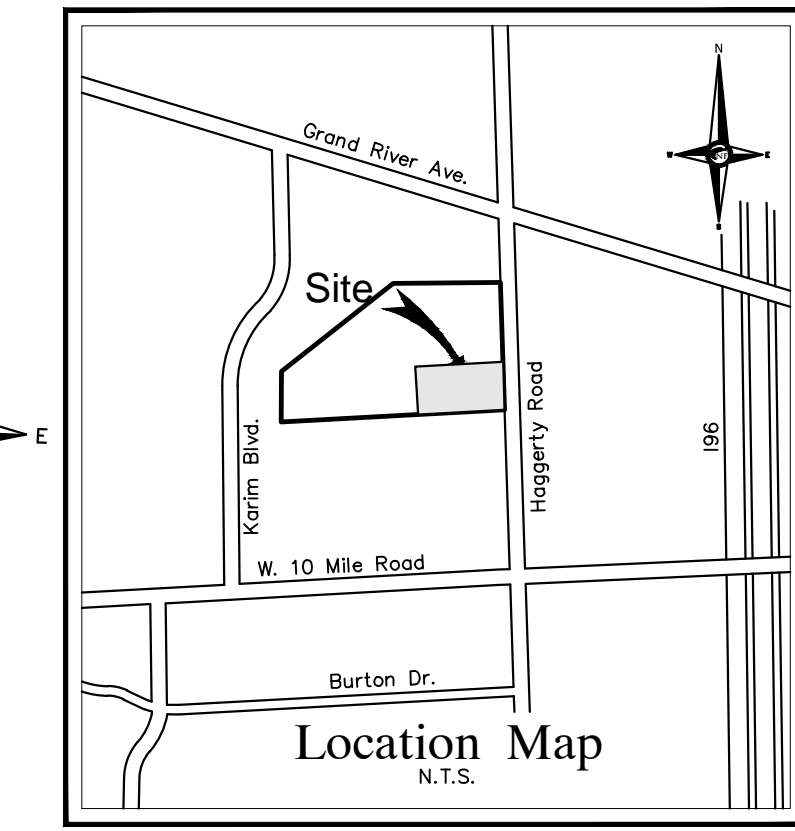
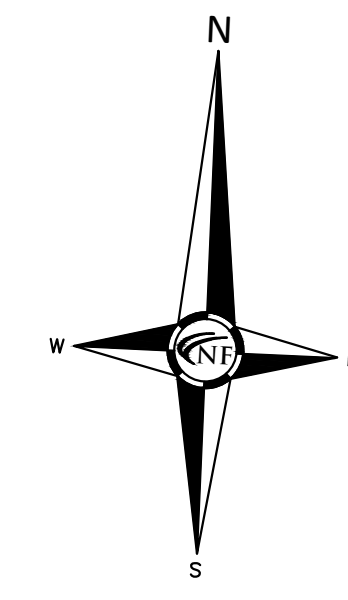
APPROVED BY:
J. Longhurst

DATE:
November 17, 2022

SCALE: 1" = 20'



NFE JOB NO. SHEET NO.
1921-05 C9

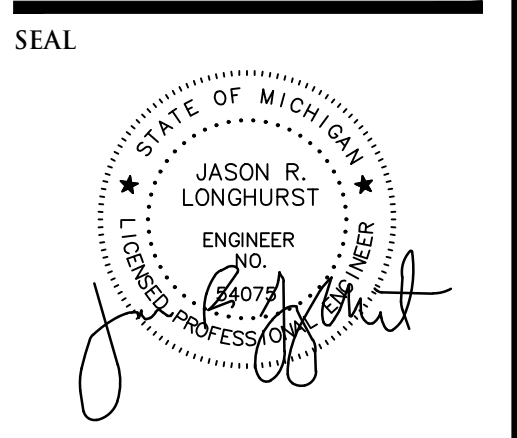


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FIRE DEPARTMENT NOTES

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 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.



PROJECT
Lithia Motors, Inc.
Porsche of Novi

CLIENT
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150 N. Bartlett Street
Medford, OR 97501

Contact:
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Tel: (541) 734-3043
email: abreck@lithia.com

PROJECT LOCATION
Part of the Southeast 1/4 of Section 23, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan

SHEET
Fire Protection Plan



**Know what's below
Call before you dig.**

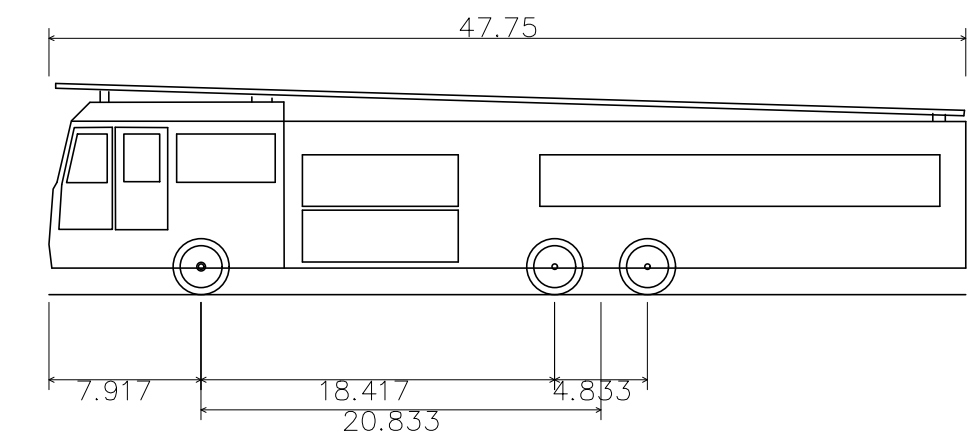
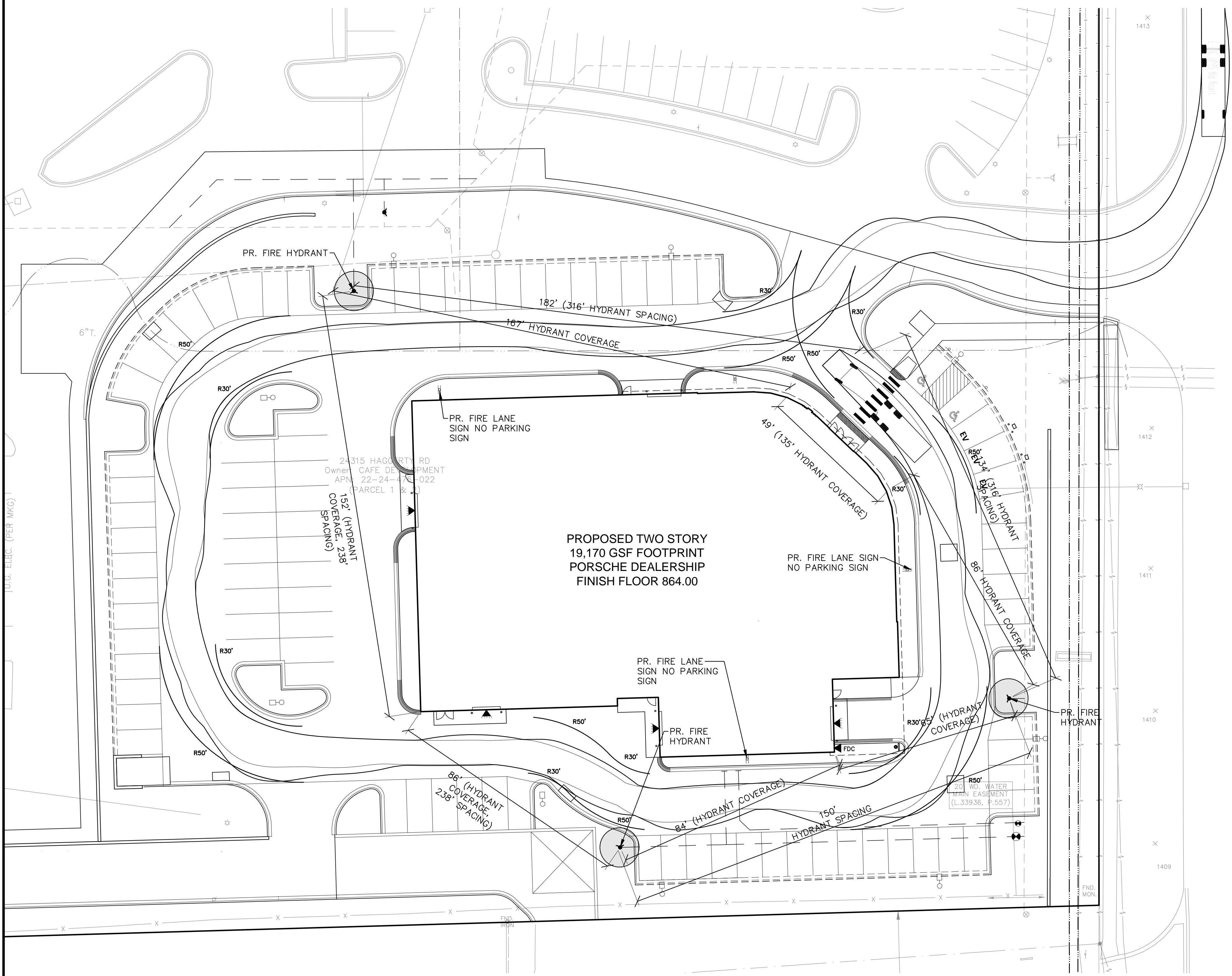
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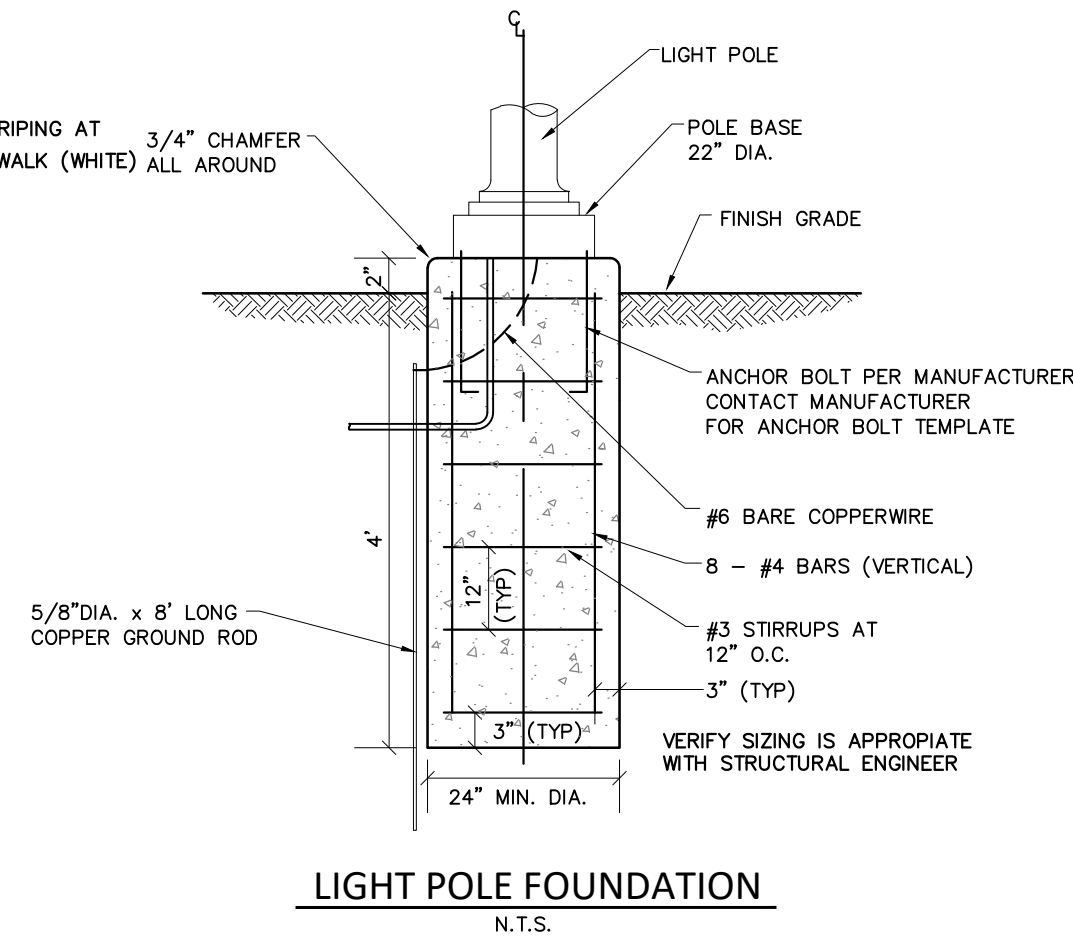
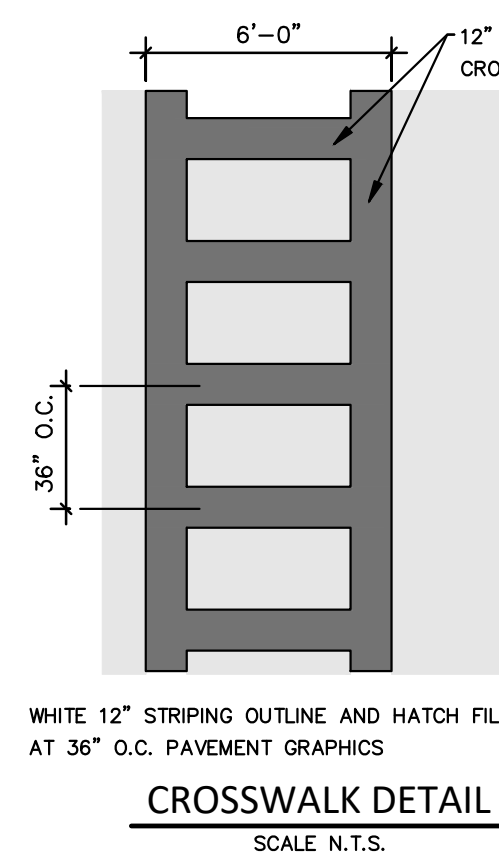
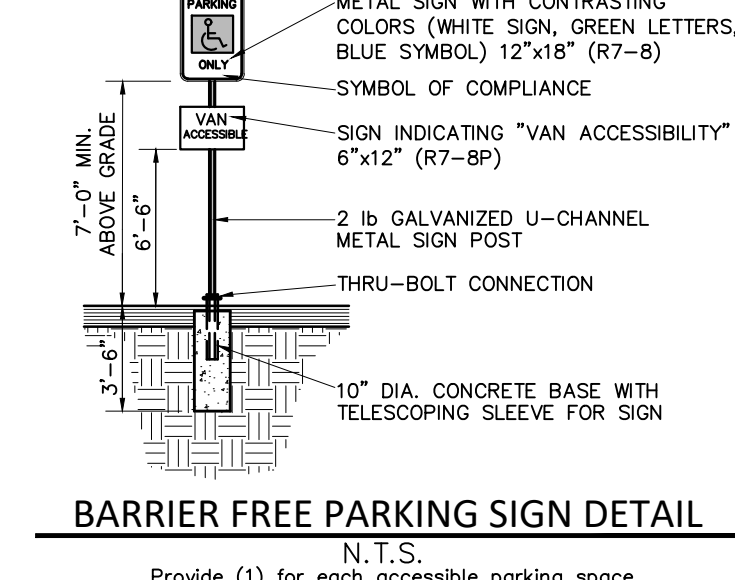
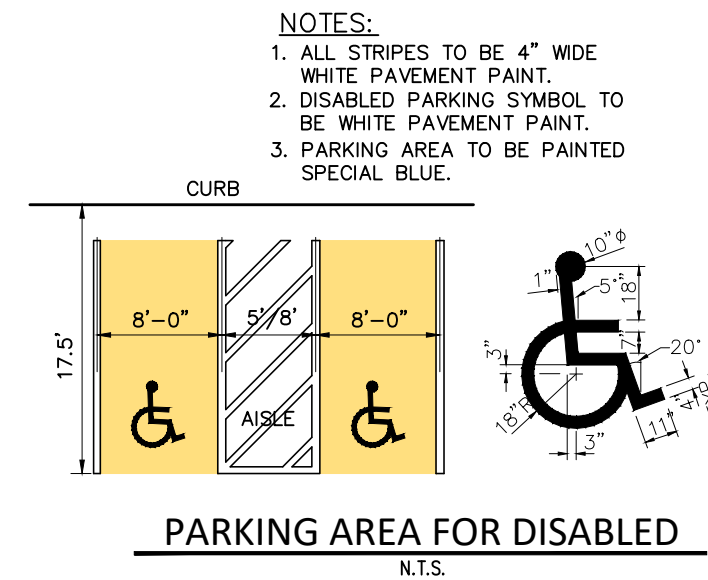
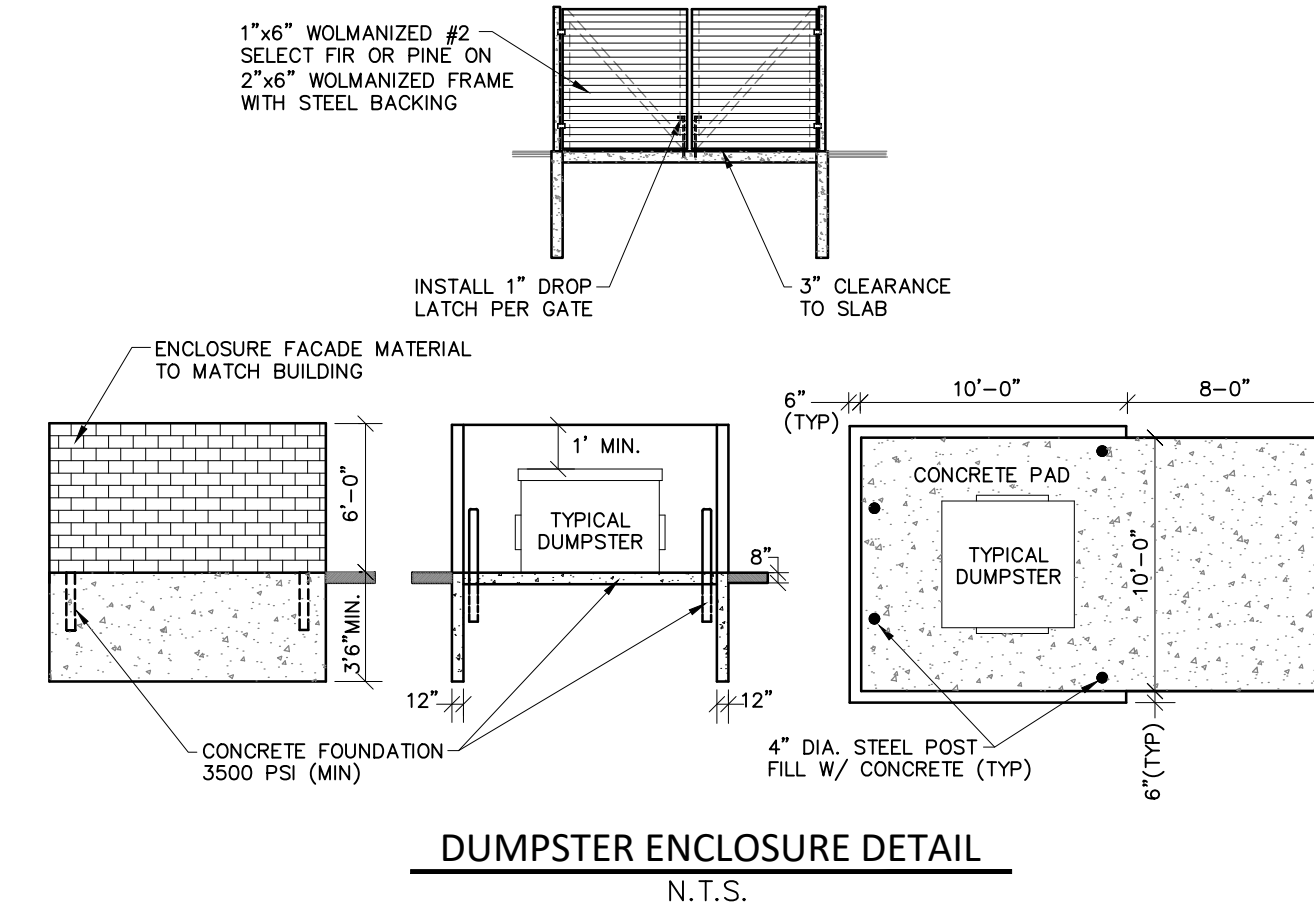
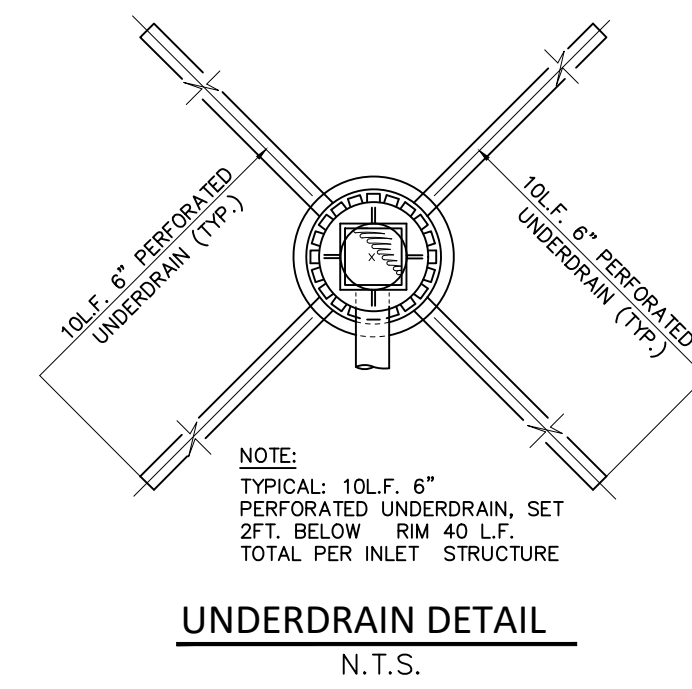
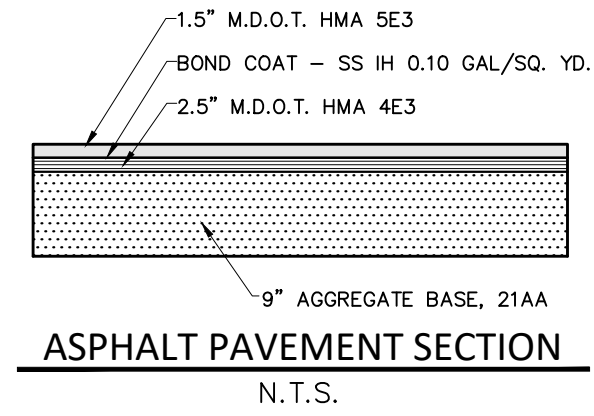
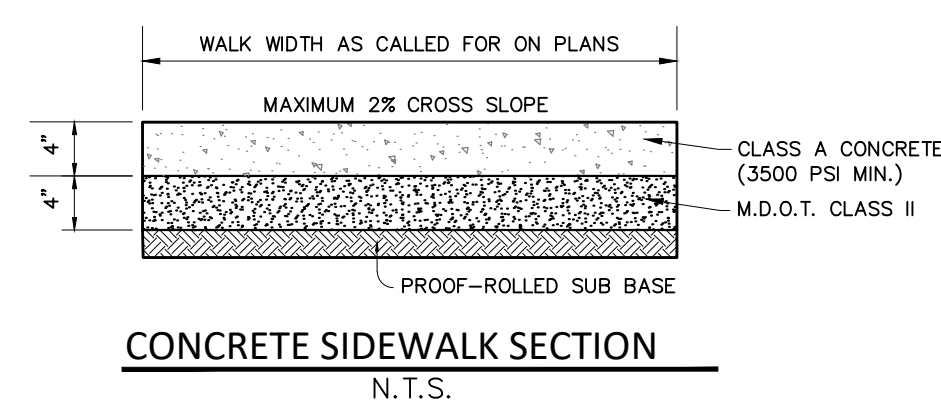
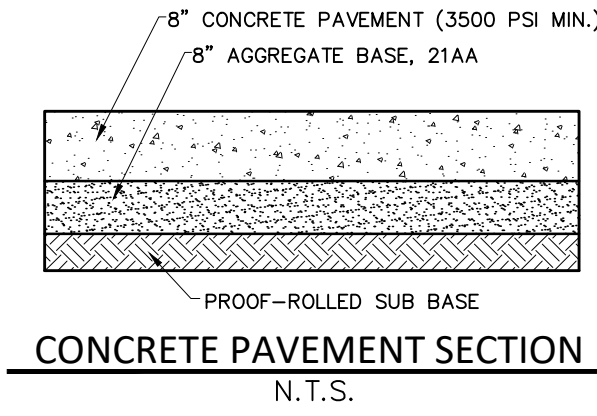
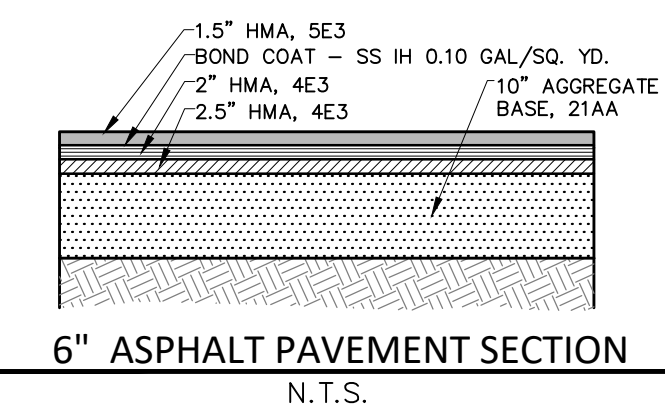
DATE:
November 17, 2022

SCALE: 1" = 20'

NFE JOB NO. SHEET NO.
1921-05 C10



E-ONE HP95 Mid Mount
Overall Length 47.750ft
Overall Width 8.333ft
Overall Body Height 11.000ft
Min Body Ground Clearance 1.393ft
Track Width 8.333ft
Lock-to-lock time 6.00s
Max Wheel Angle 45.00°



StormTech® MC-3500 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.



Nominal Chamber Specifications (not to scale)

Size (L x W x H)
90" x 77" x 45"
2286 mm x 1956 mm x 1143 mm

Chamber Storage
109.9 ft³ (3.11 m³)

Min. Installed Storage*
175.0 ft³ (4.96 m³)

Weight
134 lbs (60.8 kg)

Shipping
15 chambers/pallet
7 end caps/pallet
7 pallets/truck

Nominal End Cap Specifications (not to scale)

Size (L x W x H)
26.5" x 71" x 45.1"
673 mm x 1803 mm x 1145 mm

End Cap Storage
14.9 ft³ (0.42 m³)

Min. Installed Storage*
45.1 ft³ (1.28 m³)

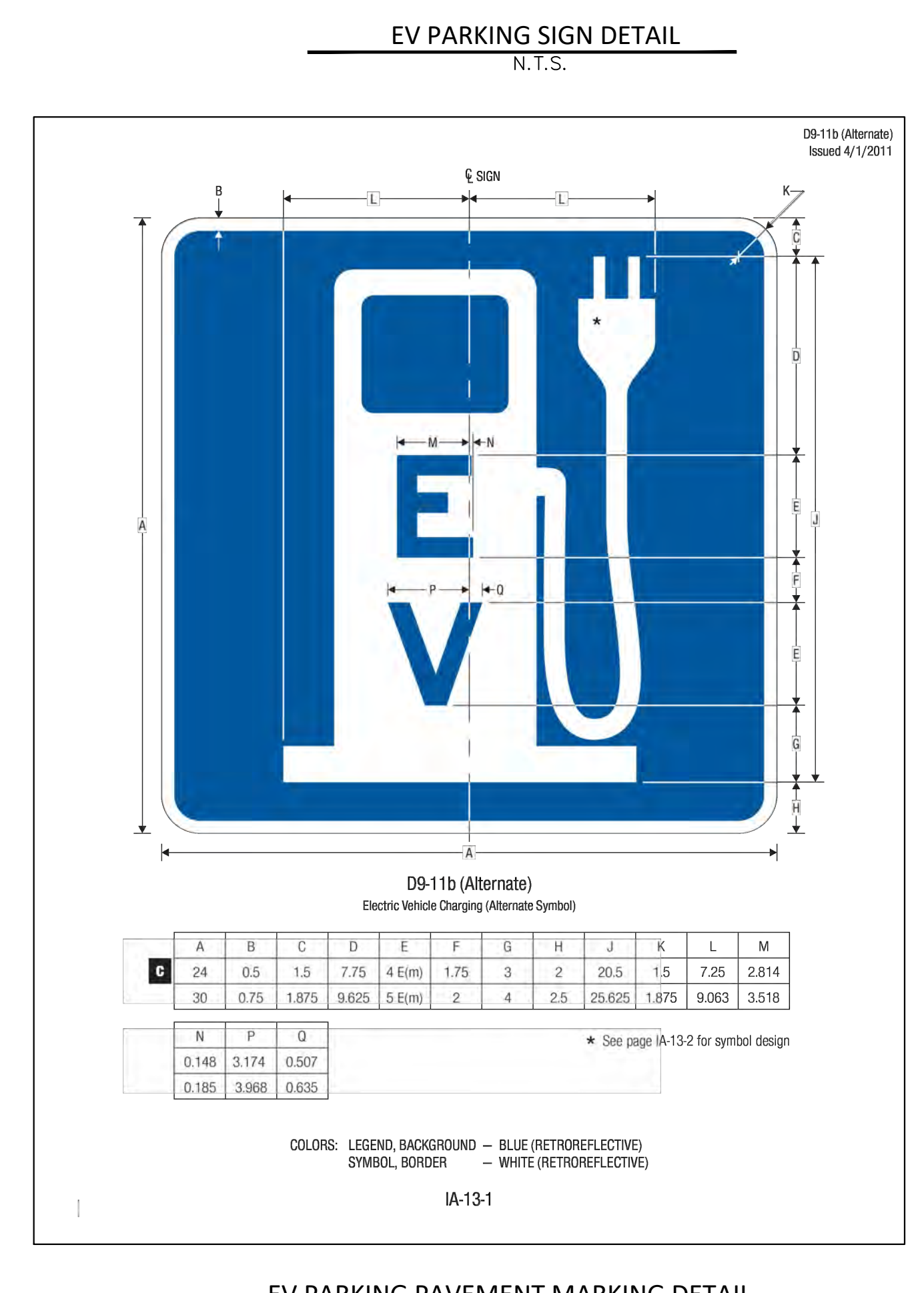
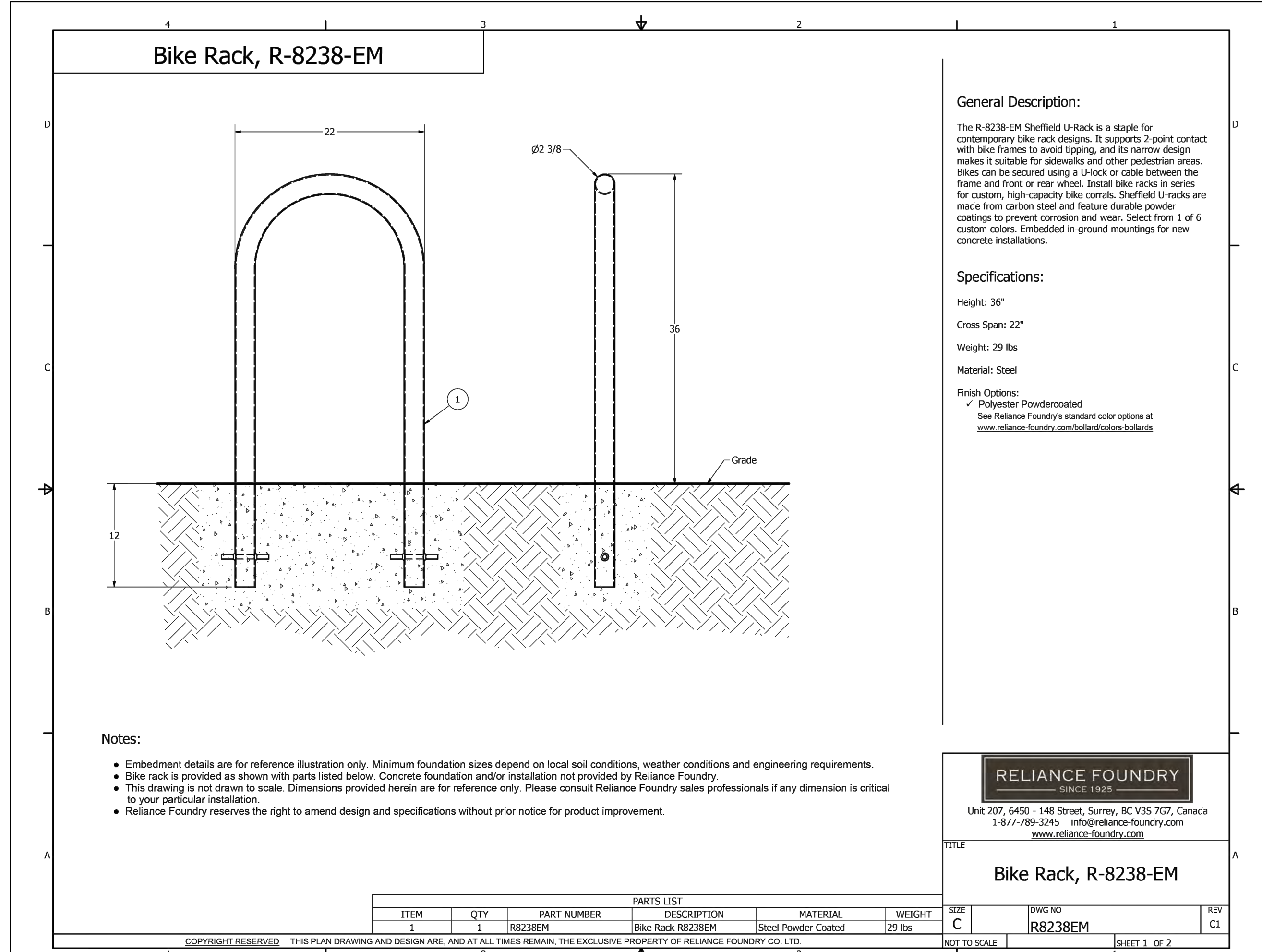
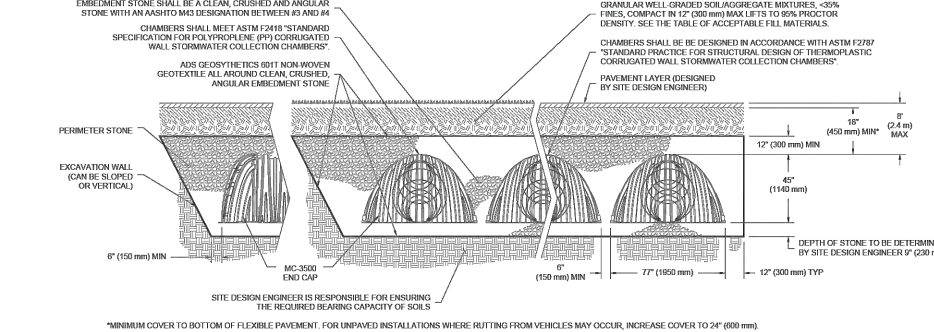
Weight
49 lbs (22.2 kg)

Shipping
15 chambers/pallet
7 end caps/pallet
7 pallets/truck

*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below, 6" (150 mm) of stone perimeter, 8" (150 mm) of stone between chambers/ end caps and 40% stone porosity.

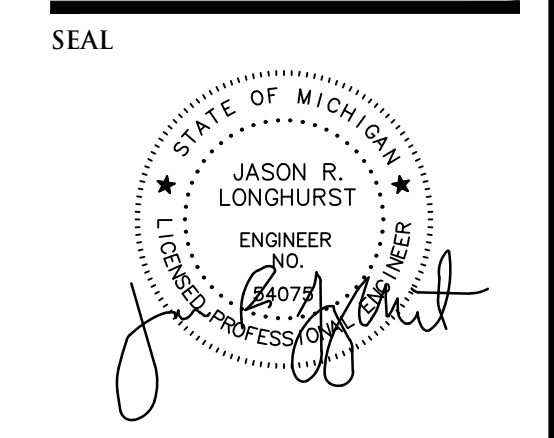
assume 15% of stone storage will clog with sediment per Novl engineering standards.
 $(45.1CF - 14.9CF) \times 0.85 + 175CF = 165.235CF$

assume 15% of stone storage will clog with sediment per Novl engineering standards.
 $(45.1CF - 14.9CF) \times 0.85 + 14.9CF = 40.57CF$



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PROJECT
Lithia Motors, Inc.
Porsche of Novi

CLIENT
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150 N. Bartlett Street
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Contact:
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Tel: (541) 734-3043
email: abreck@lithia.com

PROJECT LOCATION
Part of the Southeast 1/4 of Section 23, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan

SHEET
Notes and Details



DATE ISSUED/REVISED
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T. Wood

DESIGNED BY:
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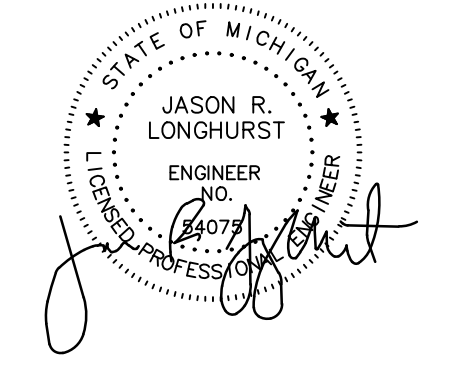
APPROVED BY:
J. Longhurst

DATE:
November 17, 2022

SCALE: N.T.S.

NFE JOB NO. 1921-05
SHEET NO. C11

SEAL



PROJECT
 Lithia Motors, Inc.
 Porsche of Novi

CLIENT
 Lithia Motors, Inc.
 150 N. Bartlett Street
 Medford, OR 97501

Contact:
 Ms. Anne Breck
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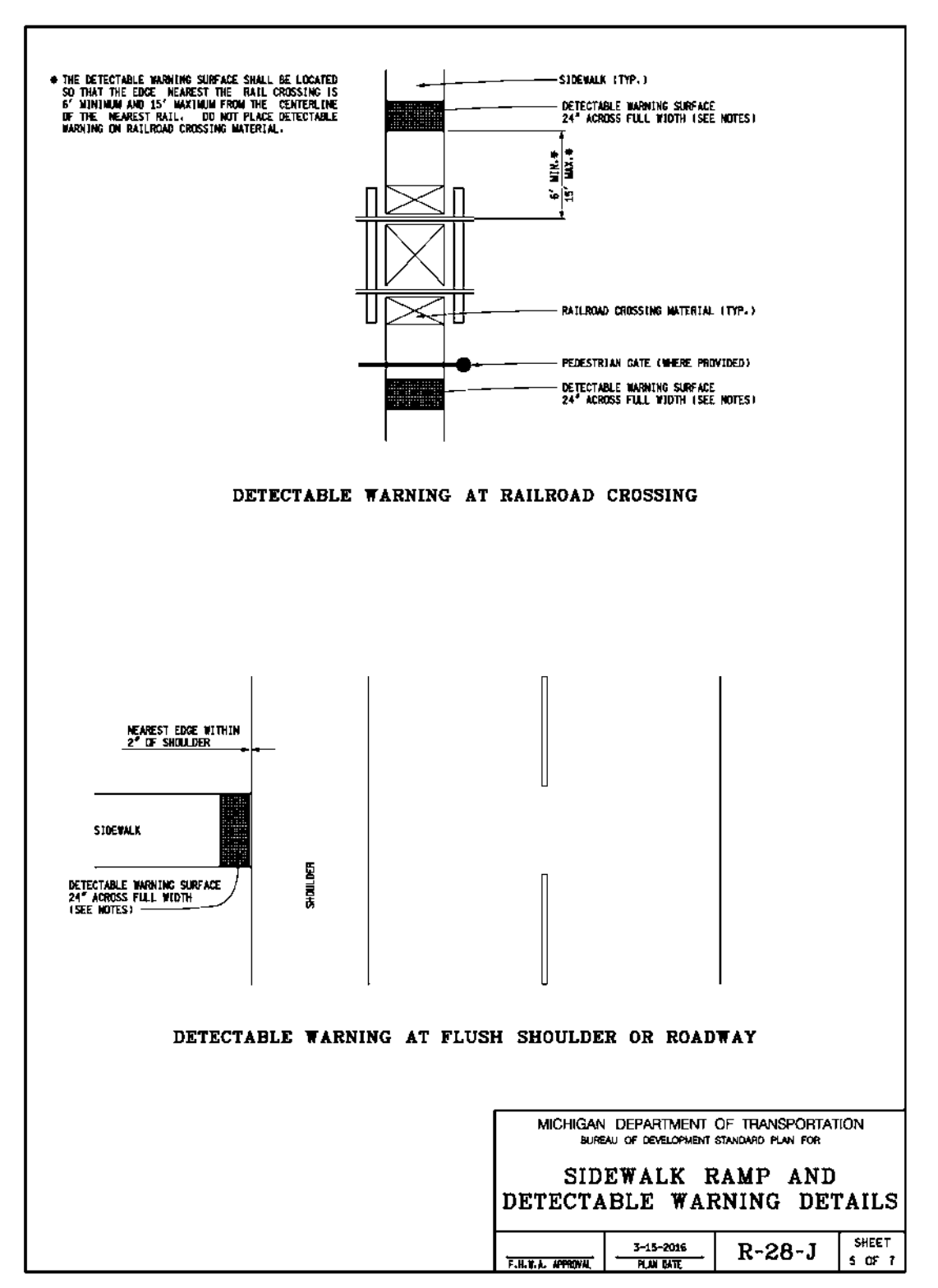
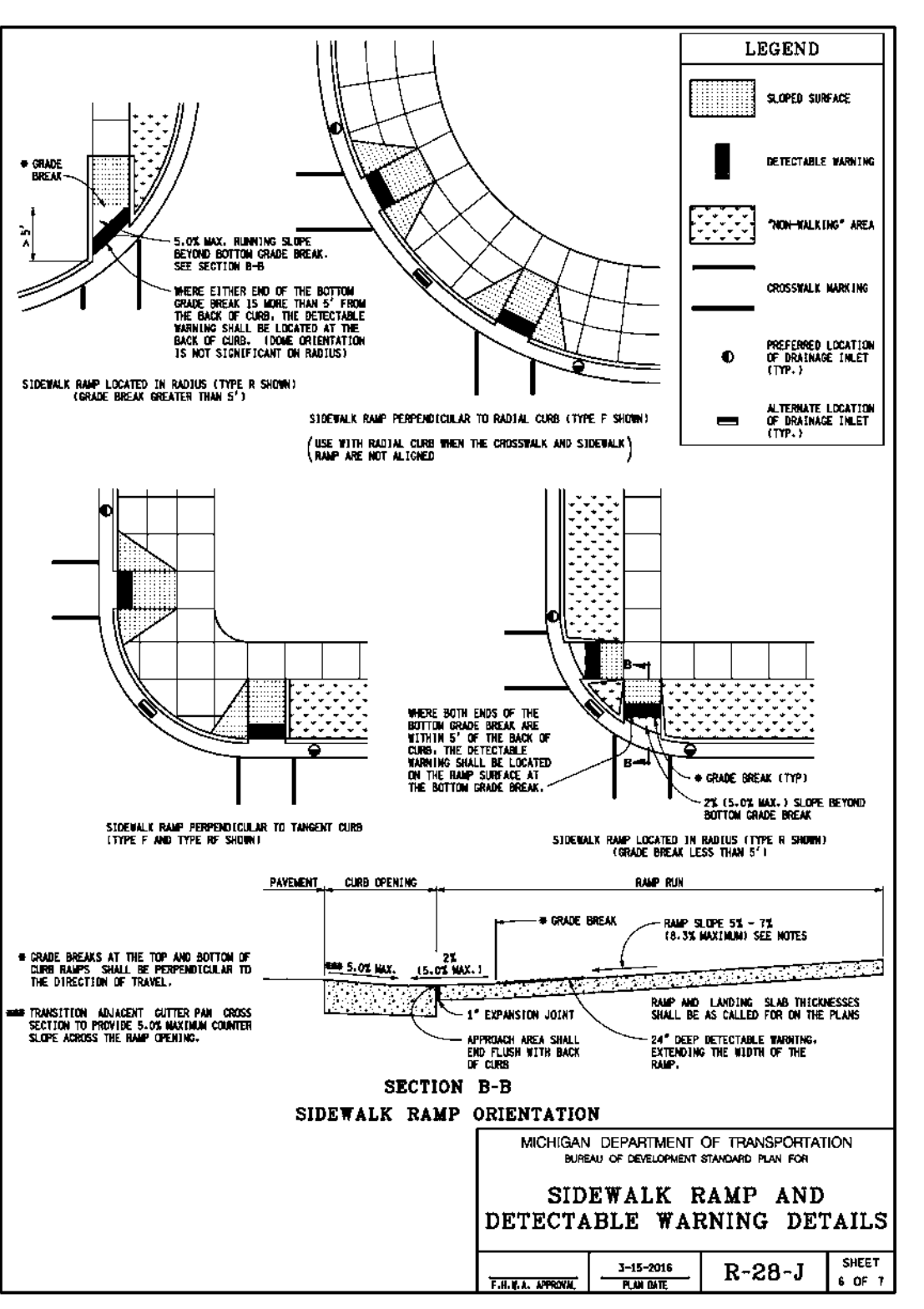
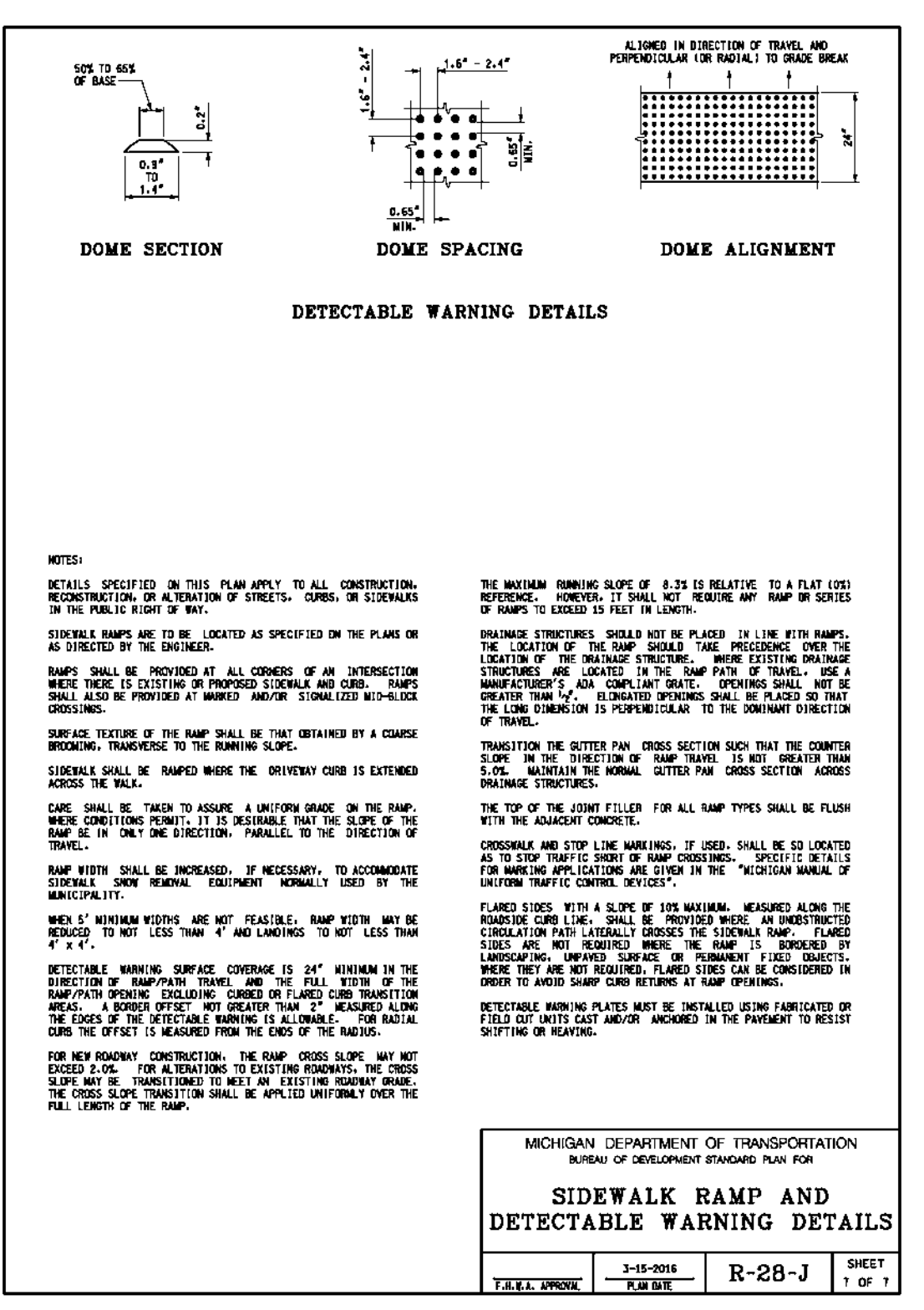
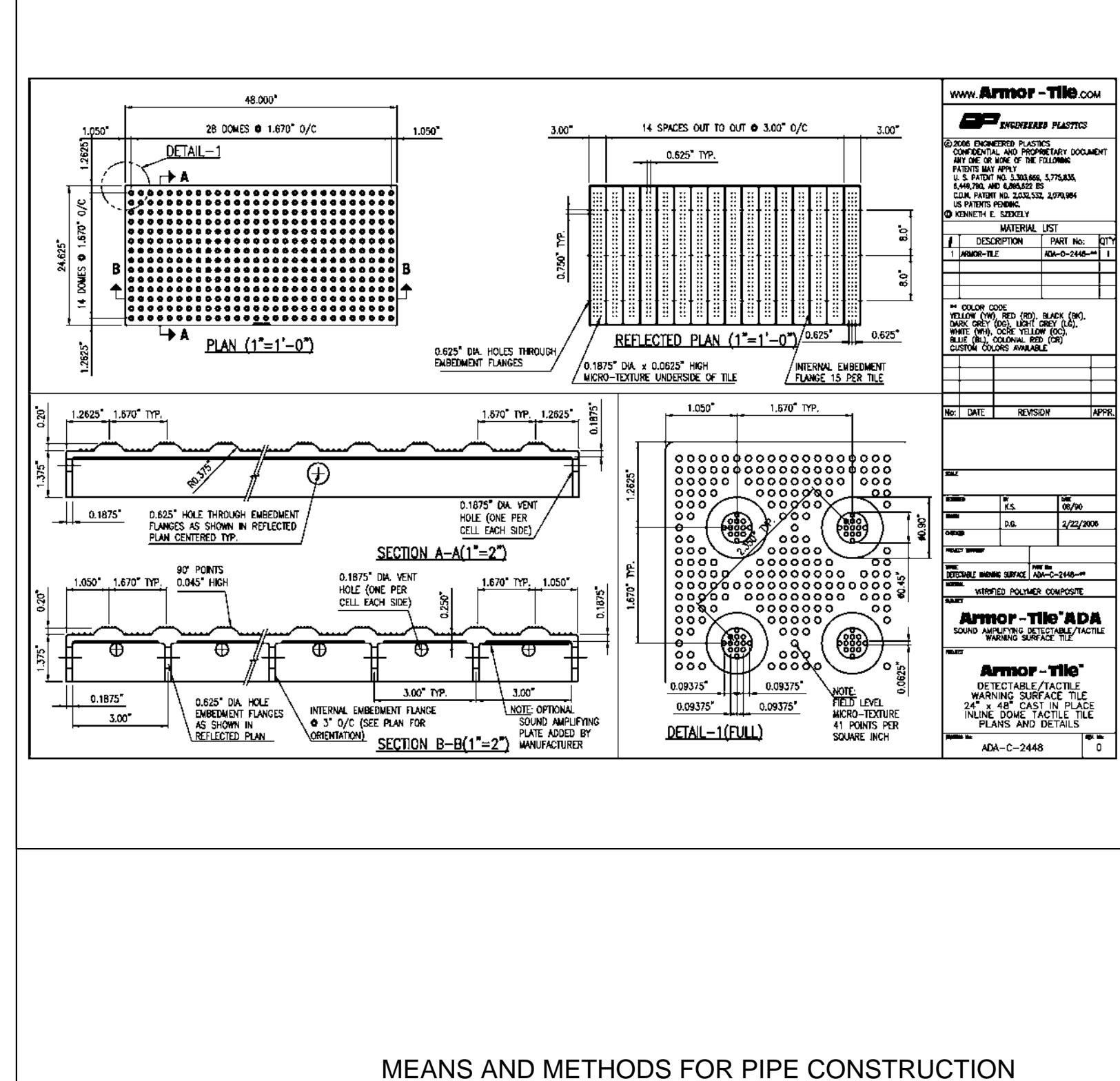
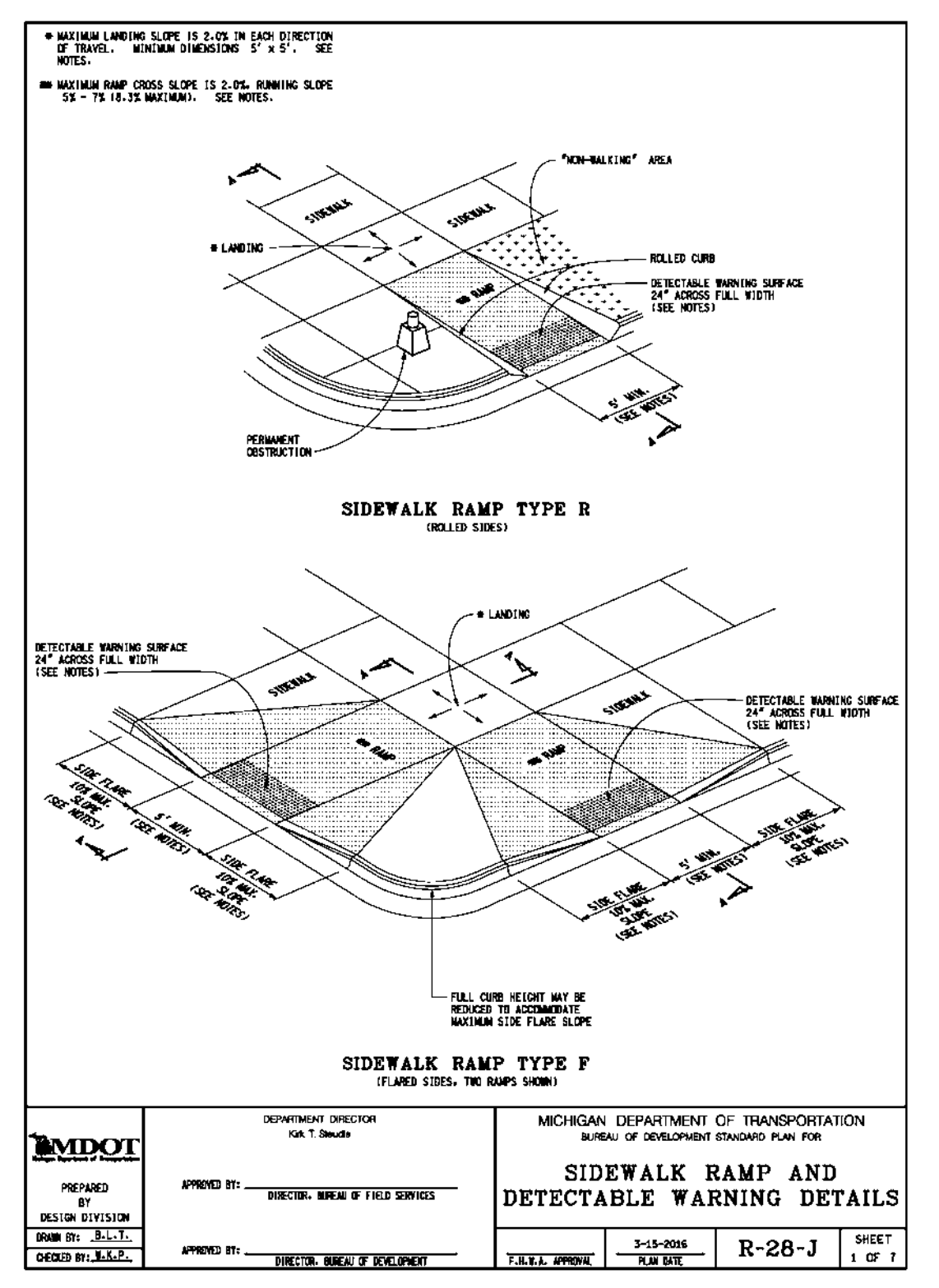
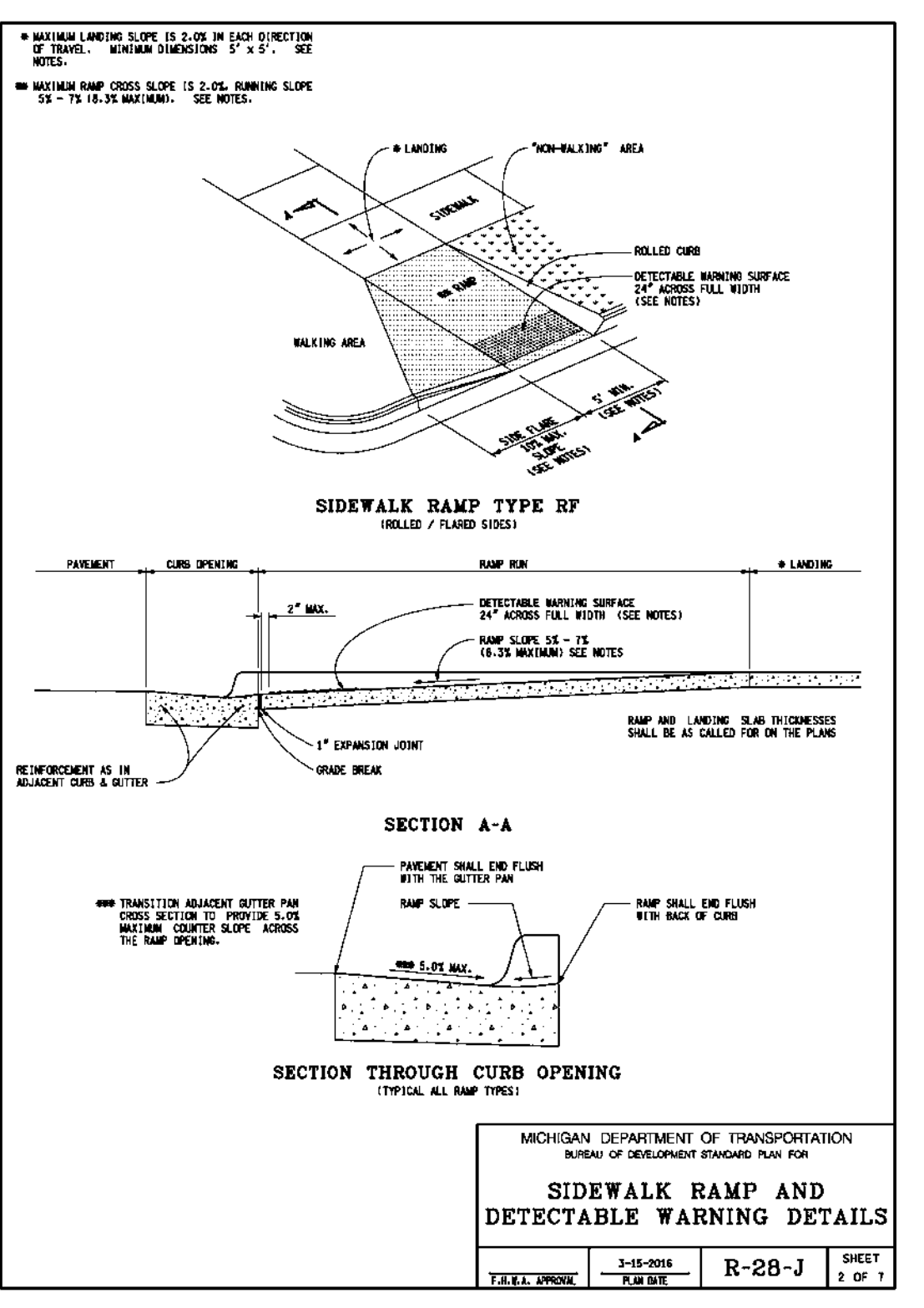
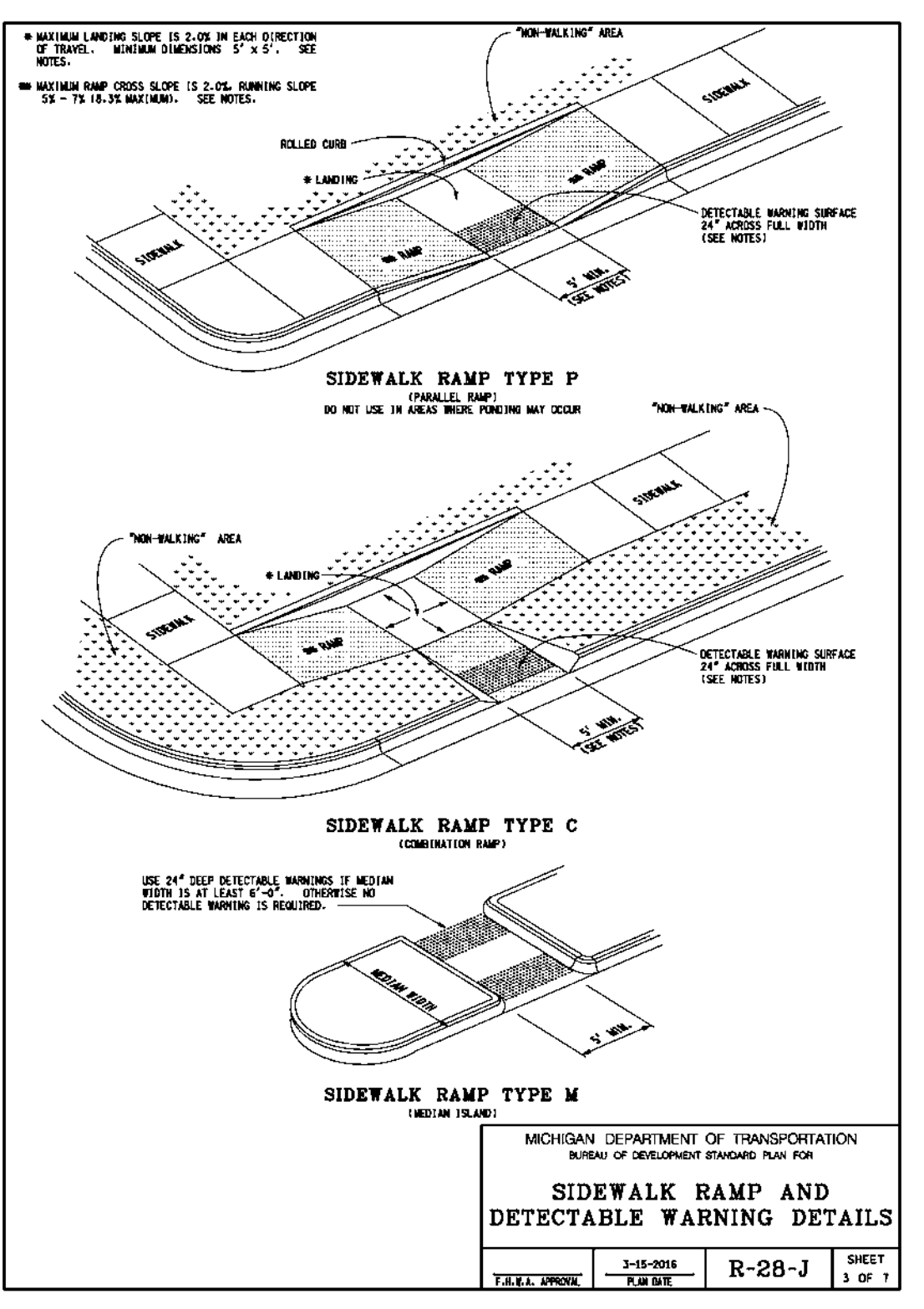
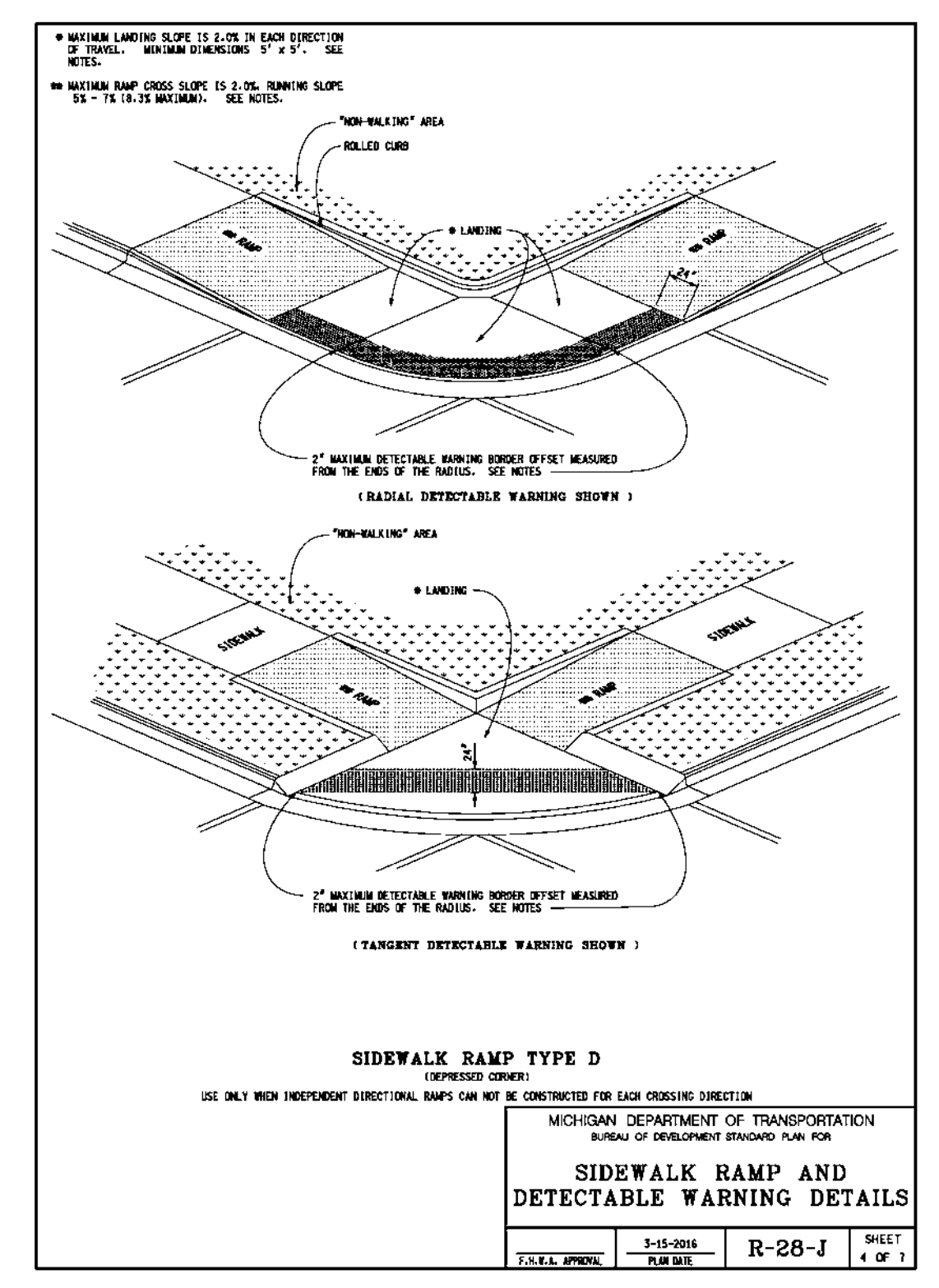
DESIGNED BY:
 T. Wood

APPROVED BY:
 J. Longhurst

DATE:
 November 17, 2022

SCALE: N.T.S.

NFE JOB NO. SHEET NO.
 1921-05 C12



MEANS AND METHODS FOR PIPE CONSTRUCTION

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MEANS AND METHODS FOR CONSTRUCTING THE UNDERGROUND PIPE SYSTEMS PROPOSED ON THE PLANS, INCLUDING BUT NOT LIMITED TO THE NEED FOR SHORING/BRACING OF TRENCHES, DEWATERING OF TRENCHES, SCHEDULING THE WORK AT OFF PEAK HOURS, AND/OR MAINTAINING EXISTING FLOWS THAT MAY BE ENCOUNTERED VIA PUMPING, BY-PASS PIPING OR OTHER MEANS. THE CONTRACTOR SHALL NOT BE PAID ANY ADDITIONAL COMPENSATION TO IMPLEMENT ANY MEANS AND METHODS TO SATISFACTORILY COMPLETE THE CONSTRUCTION.

PAVEMENT REMOVAL

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE THICKNESS OF THE PAVEMENT VEHICULAR AND PEDESTRIAN TRAFFIC IN THE ROAD RIGHTS OF WAY. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAG PERSONS AND OTHER TRAFFIC CONTROL MEASURES AS REQUIRED BY MDT, THE COUNTY, OR THE COMMUNITY HAVING JURISDICTION OF THE ROAD AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

MAINTENANCE OF TRAFFIC

DURING THE PROGRESS OF THE WORK THE CONTRACTOR SHALL ACCOMMODATE BOTH VEHICULAR AND PEDESTRIAN TRAFFIC IN THE ROAD RIGHTS OF WAY. THE CONTRACTOR SHALL OBTAIN AND SATISFY ANY AND ALL PERMIT REQUIREMENTS BY THE LOCAL, COUNTY AND STATE GOVERNMENTAL AGENCIES.

IN ADDITION, WHERE THE WORK REQUIRES THE CLOSURE OF ONE OR MORE LANES OR IS WITHIN THE INFLUENCE OF THE ROAD OR PEDESTRIAN RIGHT OF WAY, THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAG PERSONS AND OTHER TRAFFIC CONTROL MEASURES AS REQUIRED BY MDT, THE COUNTY, OR THE COMMUNITY HAVING JURISDICTION OF THE ROAD AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

COMPENSATION FOR TRAFFIC CONTROL SHALL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE(S) UNLESS SPECIFIC TRAFFIC CONTROL ITEMS ARE INCLUDED IN THE ACCEPTED BID PROPOSAL.

IRRIGATION

THE CONTRACTOR SHALL MAINTAIN OR REPAIR ANY EXISTING IRRIGATION SYSTEMS WITHIN THE PROJECT AREA UNLESS THE DRAWINGS CALL FOR THE IRRIGATION SYSTEM TO BE REMOVED. THE OWNER AND NEI MAKE NO REPRESENTATIONS, WARRANTY OR GUARANTEE AS TO THE LOCATION OF THE IRRIGATION SYSTEM. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT THE IRRIGATION SYSTEM DURING CONSTRUCTION ACTIVITIES. COMPENSATION FOR MAINTAINING OR REPAIRING EXISTING IRRIGATION SYSTEMS SHALL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE(S) UNLESS SPECIFIC IRRIGATION SYSTEM REPAIR ITEMS ARE INCLUDED IN THE ACCEPTED BID PROPOSAL.

DEWATERING OF TRENCH AND EXCAVATIONS

IF NOT SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION DESIGN DOCUMENTS, THE DESIGN OR QUALITY CONTROL FOR DEWATERING SYSTEMS IS BEYOND THE SCOPE OF THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND PROVIDING APPROPRIATE EXCAVATION DEWATERING SYSTEMS FOR USE DURING CONSTRUCTION.

BY-PASS PUMPING

FROM TIME TO TIME IT MAY BE NECESSARY FOR THE CONTRACTOR TO BY-PASS PUMP TO COMPLETE THE WORK INDICATED ON THE PLANS. THE COST OF BY-PASS PUMPING, THE METHODS, EQUIPMENT AND MEANS OF PROVIDING THAT WORK ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED PART OF THE WORK WHETHER SPECIFICALLY CALLED OUT ON THE PLANS OR NOT.

UTILITIES

AT LEAST 72 HOURS (3 WORKING DAYS) PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY MISS DIG AND THE LOCAL COMMUNITY (WHERE APPLICABLE) TO STAKE LOCATIONS OF EXISTING UTILITIES.

THE CONTRACTOR SHALL EXPOSE AND VERIFY EXISTING UTILITIES FOR LOCATION, SIZE, DEPTH, MATERIAL AND CONFIGURATION PRIOR TO CONSTRUCTION. COSTS FOR EXPLORATORY EXCAVATION IS AN INCIDENTAL COST AND SHALL NOT BE CONSIDERED AN EXTRA TO THE CONTRACT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY EXISTING UTILITIES WHICH DO NOT MATCH THE PLANS AND SPECIFICATIONS PRIOR TO COMMENCING WORK. ANY FIELD CHANGES OF THE PROPOSED UTILITIES SHALL BE APPROVED BY THE OWNER AND ENGINEER BEFORE THE WORK IS DONE.

THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE. ANY SERVICE OR UTILITY DAMAGED OR REMOVED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR, IN CONFORMANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY PROVIDER.

DAMAGE TO PRIVATE PROPERTY

ALL SIDEWALKS, DRIVEWAYS, LAWNS, FENCING, TREES, SHRUBS, SPRINKLERS, LANDSCAPING, ETC., THAT ARE DAMAGED DURING CONSTRUCTION MUST BE REPAIRED OR REPLACED, IN KIND OR BETTER, BY THE CONTRACTOR. ALL STREET SIGNS, MAIL BOXES, ETC., REMOVED SHALL BE REPLACED IN KIND OR BETTER, BY THE CONTRACTOR. ALL THE REPAIRS OR REPLACEMENTS DUE TO THE CONTRACTOR'S WORK ARE TO BE INCLUDED IN THE CONTRACT PRICE(S) AND SHALL NOT BE AN EXTRA TO THE CONTRACT.

THE CONTRACTOR SHALL SECURE PERMISSION IN WRITING FROM ADJACENT PROPERTY OWNERS PRIOR TO ENTERING UPON ANY ADJOINING PROPERTIES, UNLESS OFFSITE PERMITS HAVE ALREADY BEEN OBTAINED BY THE OWNER AND ARE PART OF THE CONTRACT DOCUMENTS.

TRENCH BACKFILL

TRENCH BACKFILL SHALL BE PLACED IN CONFORMANCE WITH THE PLANS AND/OR SPECIFICATIONS. TRENCH BACKFILL SHALL ALSO BE INSTALLED IN CONFORMANCE WITH THE COMMUNITY REQUIREMENTS OR AGENCY/UTILITY GOVERNING SAID TRENCH CONSTRUCTION. IN THE CASE OF CONFLICTING REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.

EARTH BALANCE / GRADING

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHETHER THE SITE EARTHWORK BALANCES OR NOT. ANY EXCESS OUT MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR. IN A LIKE MANNER, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMPORT MATERIAL TO CORRECT DEFICIENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COMPACTING REQUIREMENTS PER THE ENGINEER'S PLAN AND ALL APPLICABLE GOVERNMENTAL STANDARDS. THE ENGINEER AND OWNER MAKE NO REPRESENTATION AS TO THE QUANTITIES THAT MAY BE NEEDED TO CREATE A BALANCED EARTHWORK CONDITION OR THAT THE SITE EARTHWORK IS BALANCED.

SOIL EROSION / SEDIMENTATION CONTROL

THE CONTRACTOR SHALL OBTAIN THE REQUIRED SOIL EROSION PERMIT AND SATISFY ALL REGULATORY REQUIREMENTS FOR CONTROLLING SOIL EROSION AND SEDIMENT TRANSPORT. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR INSPECTION OR APPROVAL OF THE CONTRACTOR'S WORK IN CONNECTION WITH SATISFYING THE SOIL EROSION PERMIT REQUIREMENTS UNLESS SPECIFICALLY STATED IN THE CONTRACT DOCUMENTS.

SUBGRADE UNDERCUTTING AND PREPARATION

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY AND ALL SOILS WHICH DO NOT CONFORM TO THE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A SUBGRADE IN CONFORMANCE WITH THE PROJECT PLANS AND/OR SPECIFICATIONS. THE MEANS AND METHODS USED TO ACHIEVE THE REQUIRED RESULT SHALL REST SOLELY WITH THE CONTRACTOR.

ANY AREAS OF UNDERCUTTING THAT RESULT IN ADDITIONAL OR EXTRA WORK BECAUSE THEY COULD NOT BE IDENTIFIED BY THE CONTRACTOR'S PRE-BID SITE OBSERVATION OR ARE NOT SET FORTH IN THE PLANS AND SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE ANY EXTRA WORK IS PERFORMED. THE CONTRACTOR SHALL MAKE A REQUEST FOR ANY ADDITIONAL COMPENSATION FOR THE UNDERCUTTING IN WRITING AND THE REQUEST SHALL CONFORM TO THE CONTRACT'S CHANGE ORDER PROVISIONS.

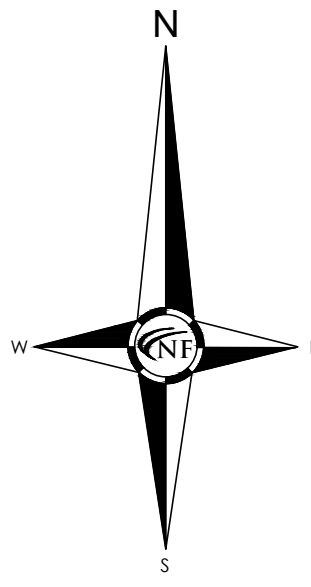
STRUCTURE BACKFILL

STRUCTURAL BACKFILL SHALL BE PLACED IN CONFORMANCE WITH THE PROJECT PLANS, SPECIFICATIONS OR AS REQUIRED BY THE COMMUNITY, GOVERNMENT AGENCY OR UTILITY THAT HAS JURISDICTION OVER THE WORK.

SUB-SOIL CONDITIONS

SOIL BORING PROVIDED BY THE OWNER AND/OR ENGINEER IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THIS INFORMATION IS NOT OFFERED AS EVIDENCE OF GROUND CONDITIONS THROUGHOUT THE PROJECT AND ONLY REFLECT THE GROUND CONDITIONS AT THE LOCATION OF THE BORING ON THE DATE THEY WERE TAKEN.

THE ACCURACY AND RELIABILITY OF THE SOIL LOGS AND REPORT ARE NOT WARRANTED OR GUARANTEED IN ANY WAY BY THE OWNER OR ENGINEER AS TO THE SUB-SOIL CONDITIONS FOUND ON THE SITE. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION AND SUB-SOIL INVESTIGATION AND SECURE OTHER SUCH INFORMATION AS THE CONTRACTOR CONSIDERS NECESSARY TO DO THE WORK PROPOSED AND IN PREPARATION OF THEIR BID.



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.

GROUND COVER KEY

- 1 HYDROSEED AND MULCH LAWN AREAS
2 4" DIA SPADE CUT EDGE W/ 3" SHREDDED BARK MULCH
3 3" DEPTH DOUBLE SHREDDED HARDWOOD BARK MULCH
4 POSSIBLE SNOW DEPOSITION AREA, TO BE COORDINATED WITH REMOVAL SERVICE

GENERAL SEED NOTE:

ALL LAWN AREAS DESIGNATED TO BE SEED. SHALL BE HYDRO-SEEDED WITH SPECIFIED BLENDS, AND STABILIZED WITH WOOD CELLULOSE FIBER MULCH (2,000 LBS PER ACRE)...

TYPICAL SEEDED LAWN MIX:

ALL LAWN AREAS DESIGNATED TO BE SEED. SHALL BE HYDROSEEDDED WITH TYPICAL DROUGHT TOLERANT, DURABLE BLENDED SEED MIX, AT A RATE OF 220 LBS PER ACRE...

GENERAL NOTES:

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

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...

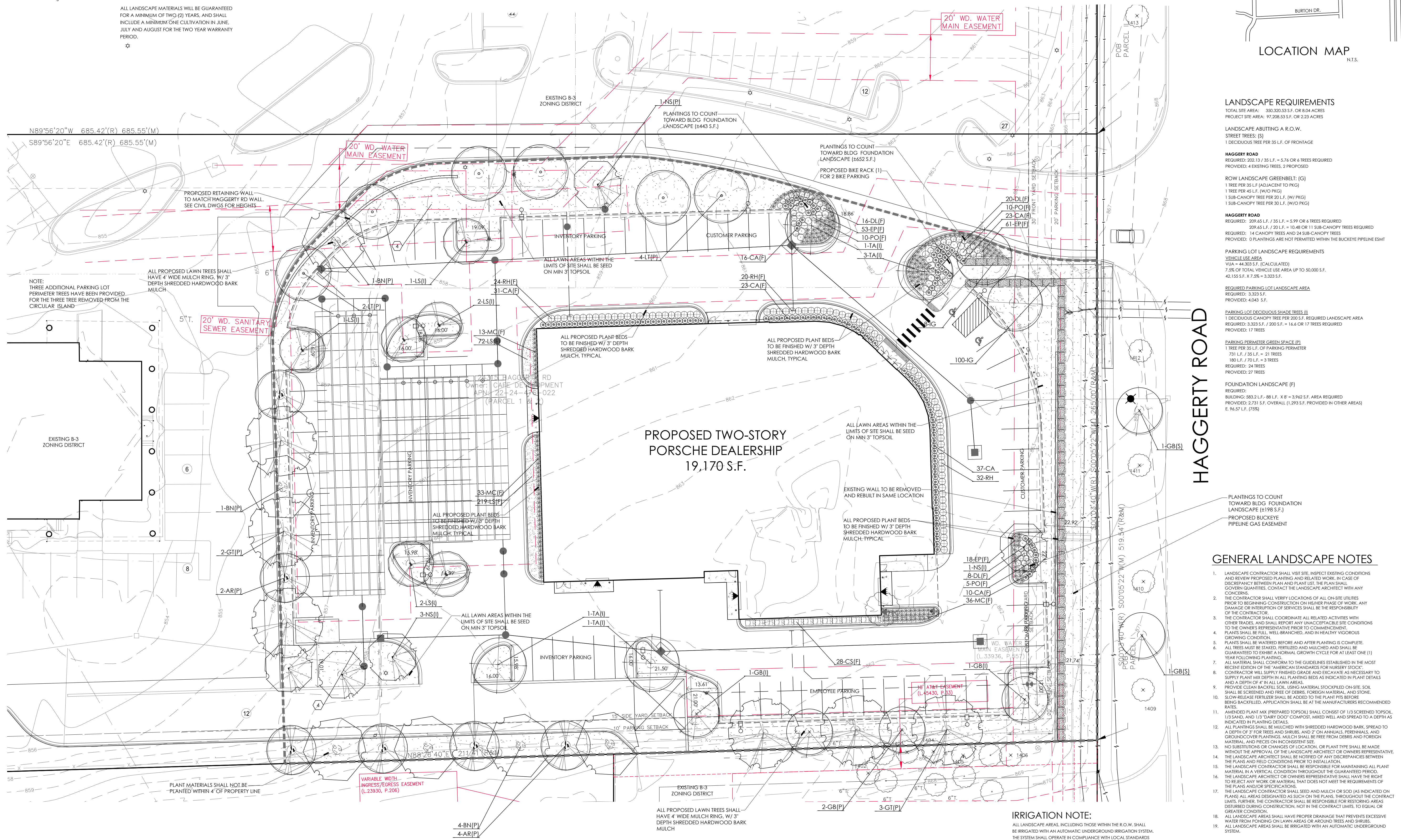
LANDSCAPE WAIVERS REQUESTED:

- LACK OF GREENBELT TREES ALONG HAGGERTY ROAD
LACK OF GREENBELT BERM ALONG HAGGERTY ROAD CONTINGENT ON PROVISION OF SCREENING HEDGE
DEFICIENCY IN BUILDING FOUNDATION LANDSCAPING AT BUILDING AS APPLICANT WILL PUT COMPENSATING LANDSCAPING ON HAGGERTY ROAD SIDE AND ENTRY TO PARKING LOT...



CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

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



HAGGERTY ROAD

HAGGERTY ROAD

HAGGERTY ROAD

NOTE: THREE ADDITIONAL PARKING LOT PERIMETER TREES HAVE BEEN PROVIDED FOR THE THREE TREE REMOVED FROM THE CIRCULAR ISLAND.

ALL PROPOSED LAWN TREES SHALL HAVE 4" WIDE MULCH RING, W/ 3" DEPTH SHREDDED HARDWOOD BARK MULCH.

ALL PROPOSED PLANT BEDS TO BE FINISHED W/ 3" DEPTH SHREDDED HARDWOOD BARK MULCH, TYPICAL.

ALL PROPOSED PLANT BEDS TO BE FINISHED W/ 3" DEPTH SHREDDED HARDWOOD BARK MULCH, TYPICAL.

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20' WD. WATER MAIN EASEMENT

20' WD. SANITARY SEWER EASEMENT

10' ABUT EASEMENT (4430, P.33)

VARIABLE WIDTH INGRESS/EGRESS EASEMENT (L.23930, P.206)

PROPOSED TWO-STORY PORSCHE DEALERSHIP 19,170 S.F.

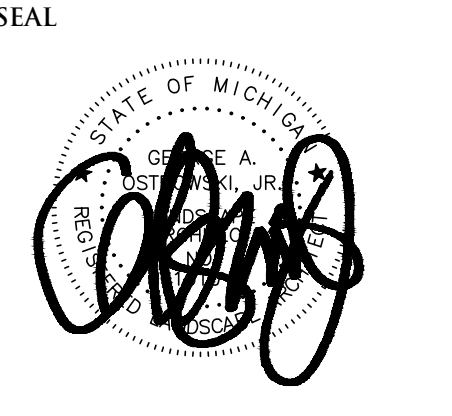
- LANDSCAPE REQUIREMENTS
TOTAL SITE AREA: 350,320 S.F.
PROJECT SITE AREA: 97,208 S.F.
LANDSCAPE ABUTTING A R.O.W.
STREET TREES: (5)
1 DECIDUOUS TREE PER 35 L.F. OF FRONTAGE
HAGGERTY ROAD
REQUIRED: 202 1 3/5 L.F. + 5.76 OR 6 TREES REQUIRED
PROVIDED: 4 EXISTING TREES, 2 PROPOSED
ROW LANDSCAPE GREENBELT: (5)
1 TREE PER 35 L.F. (ADJACENT TO PKG)
1 TREE PER 45 L.F. (W/O PKG)
1 SUB-CANOPY TREE PER 20 L.F. (W/ PKG)
1 SUB-CANOPY TREE PER 30 L.F. (W/O PKG)
HAGGERTY ROAD
REQUIRED: 309.65 L.F. / 35 L.F. = 8.85 OR 9 TREES REQUIRED
209.65 L.F. / 20 L.F. = 10.48 OR 11 SUB-CANOPY TREES REQUIRED
REQUIRED: 14 CANOPY TREES AND 24 SUB-CANOPY TREES
PROVIDED: 0 PLANTINGS ARE NOT PERMITTED WITHIN THE BUCKEYE PIPELINE EASMT
PARKING LOT LANDSCAPE REQUIREMENTS
VEHICLE USE AREA
VIA = 44,393 S.F. (CALCULATED)
7.5% OF TOTAL VEHICLE USE AREA UP TO 50,000 S.F.
42,155 S.F. X 7.5% = 3,223 S.F.
REQUIRED PARKING LOT LANDSCAPE AREA
REQUIRED: 3,223 S.F.
PROVIDED: 4,043 S.F.
PARKING LOT DECIDUOUS SHADE TREES (D)
1 DECIDUOUS CANOPY TREE PER 200 S.F. REQUIRED LANDSCAPE AREA
REQUIRED: 3,323 S.F. / 200 S.F. = 16.6 OR 17 TREES REQUIRED
PROVIDED: 17 TREES
PARKING PERIMETER GREEN SPACE (PI)
1 TREE PER 35 L.F. OF PARKING PERIMETER
731 L.F. / 35 L.F. = 21 TREES
180 L.F. / 70 L.F. = 3 TREES
REQUIRED: 24 TREES
PROVIDED: 27 TREES
FOUNDATION LANDSCAPE (F)
REQUIRED:
BUILDING: 583.2 L.F. - 88 L.F. X 8 = 3,962 S.F. AREA REQUIRED
PROVIDED: 2,731 S.F. OVERALL (1,293 S.F. PROVIDED IN OTHER AREAS)
E. 96.57 L.F. (75%)
PLANTINGS TO COUNT TOWARD BLDG FOUNDATION LANDSCAPE (4198 S.F.)
PROPOSED BUCKEYE PIPELINE GAS EASEMENT

GENERAL LANDSCAPE NOTES

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, ASPECT EXISTING CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, THE PLAN SHALL GOVERN QUANTITIES. CONTACT THE LANDSCAPE ARCHITECT WITH ANY CONCERNS.
THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON-SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON EITHER PHASE OF WORK. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
THE CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES, AND SHALL REPORT ANY UNACCEPTABLE SITE CONDITIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT.
PLANTS SHALL BE FULL, WELL-BRANCHED, AND IN HEALTHY VIGOROUS GROWING CONDITION.
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 NURSERY STOCK".
CONTRACTOR WILL SUPPLY FINISHED GRADE AND EXCAVATE AS NECESSARY TO SUPPLY PLANTING DEPTH IN ALL PLANTING BEDS AS INDICATED IN PLANT DETAILS AND A DEPTH OF 4" IN ALL LAWN AREAS.
PROVIDE CLEAN BACKFILL SOIL USING MATERIAL STOCKPILED ON-SITE. SOIL SHALL BE SCREENED AND FREE OF DEBRIS, FOREIGN MATERIAL, AND STONE. SLOW-RELEASE FERTILIZER SHALL BE ADDED TO THE PLANT PITS BEFORE BACKFILLING. APPLICATION SHALL BE AS PER THE MANUFACTURERS RECOMMENDED RATES.
AMENDED PLANT MIX (PREPARED TOPSOIL) SHALL CONSIST OF 1/2 SCREENED TOPSOIL, 1/2 SAND, AND 1/2 "DAIRY DOO" COMPOST, MIXED WELL AND SPREAD TO A DEPTH AS INDICATED IN PLANTING DETAILS.
ALL PLANTINGS SHALL BE MULCHED WITH SHREDDED HARDWOOD BARK, SPREAD TO A DEPTH OF 3" FOR TREES AND SHRUBS, AND 2" ON ANNUALS, PERENNIALS, AND GROUND COVER PLANTINGS. MULCH SHALL BE FREE FROM DEBRIS AND FOREIGN MATERIAL, AND PRECES ON INCONSISTENT SIZE.
NO SUBSTITUTIONS OR CHANGES OF LOCATION, OR PLANT TYPE SHALL BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE PLAN AND FIELD CONDITIONS PRIOR TO FIELD INSTALLATION.
THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN A VERTICAL CONDITION THROUGHOUT THE GUARANTEED PERIOD.
THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE SHALL HAVE THE RIGHT TO RECTIFY ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLAN AND/OR SPECIFICATIONS.
THE LANDSCAPE CONTRACTOR SHALL SEED AND MURCH OR SOO (AS INDICATED ON PLANS) AREAS DESIGNATED AS SUCH ON THE PLANS, THROUGHOUT THE CONTRACT PERIODS. 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.

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.



PROJECT
Lithia Motors, Inc.
Porsche of Novi

CLIENT
Lithia Motors, Inc.
150 N. Bartlett Street
Medford, OR 97501

Contact:
Mr. Mitch Selby
Tel: (650) 238-8213
email: mselby@lithia.com

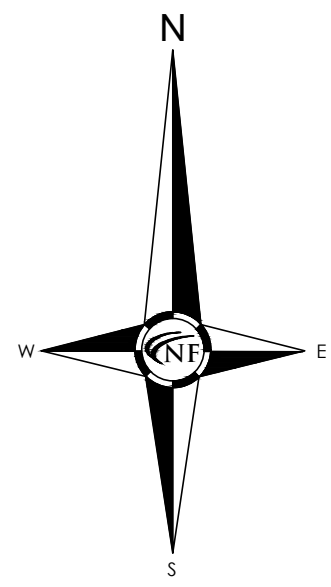
PROJECT LOCATION
Part of the Southeast 1/4 of Section 23, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan

SHEET
Landscape Plan



REVISIONS
11/15/22 ISSUED FOR PRELIMINARY SPA
01/13/23 REVISED PER CITY REVIEW

DRAWN BY: G. Ostrowski
DESIGNED BY: G. Ostrowski
APPROVED BY: G. Ostrowski
DATE: 11-15-2022
SCALE: 1" = 20'
NFE JOB NO. 1921-05 SHEET NO. L2



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



PROJECT
 Lithia Motors, Inc.
 Porsche of Novi

CLIENT
 Lithia Motors, Inc.
 150 N. Bartlett Street
 Medford, OR 97501

Contact:
 Mr. Mitch Selby
 Tel: (650) 238-8213
 email: mselby@lithia.com

PROJECT LOCATION
 Part of the Southeast 1/4 of
 Section 23, Town 1 North,
 Range 8 East, City of Novi,
 Oakland County, Michigan

SHEET
 Landscape Notes and
 Details

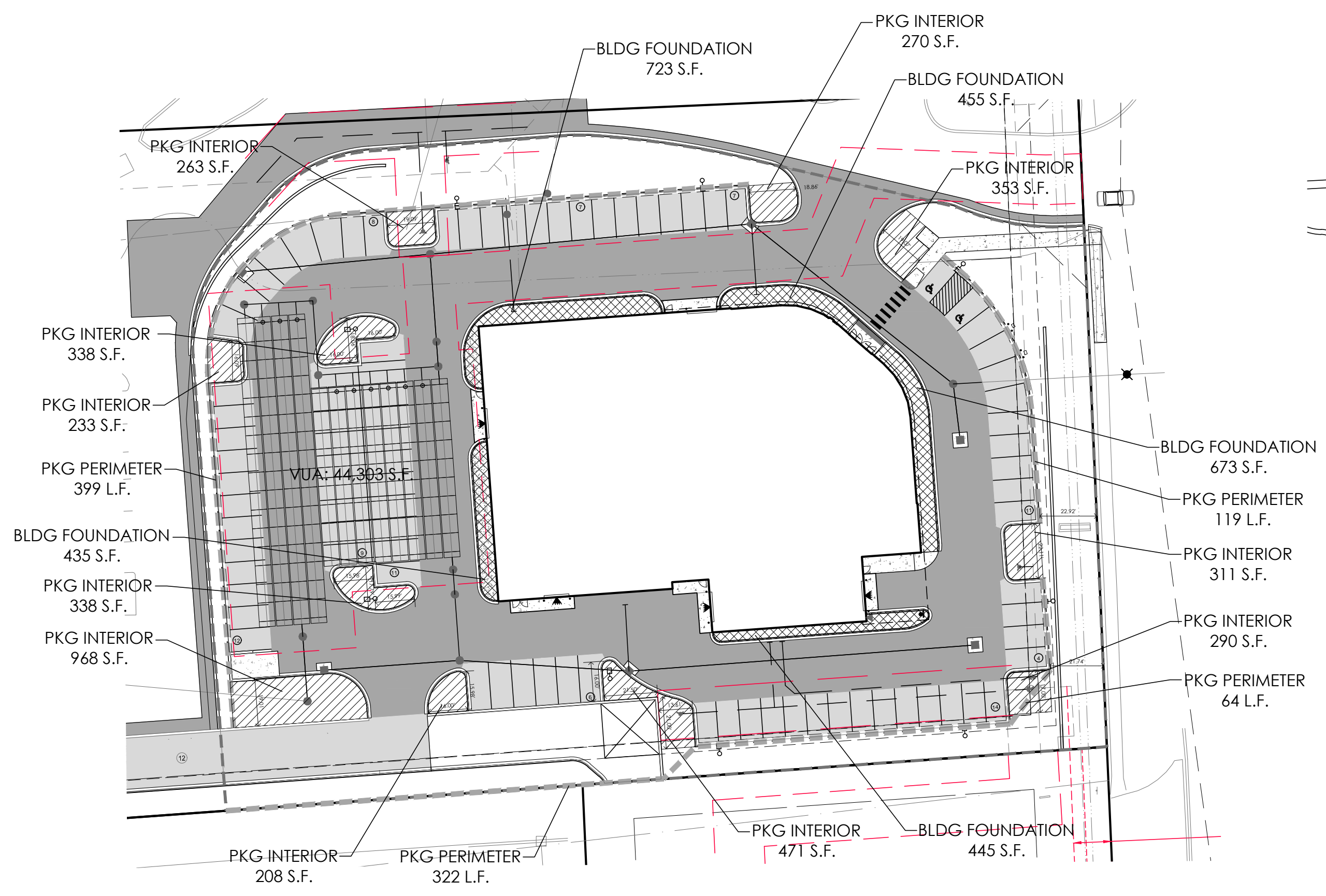


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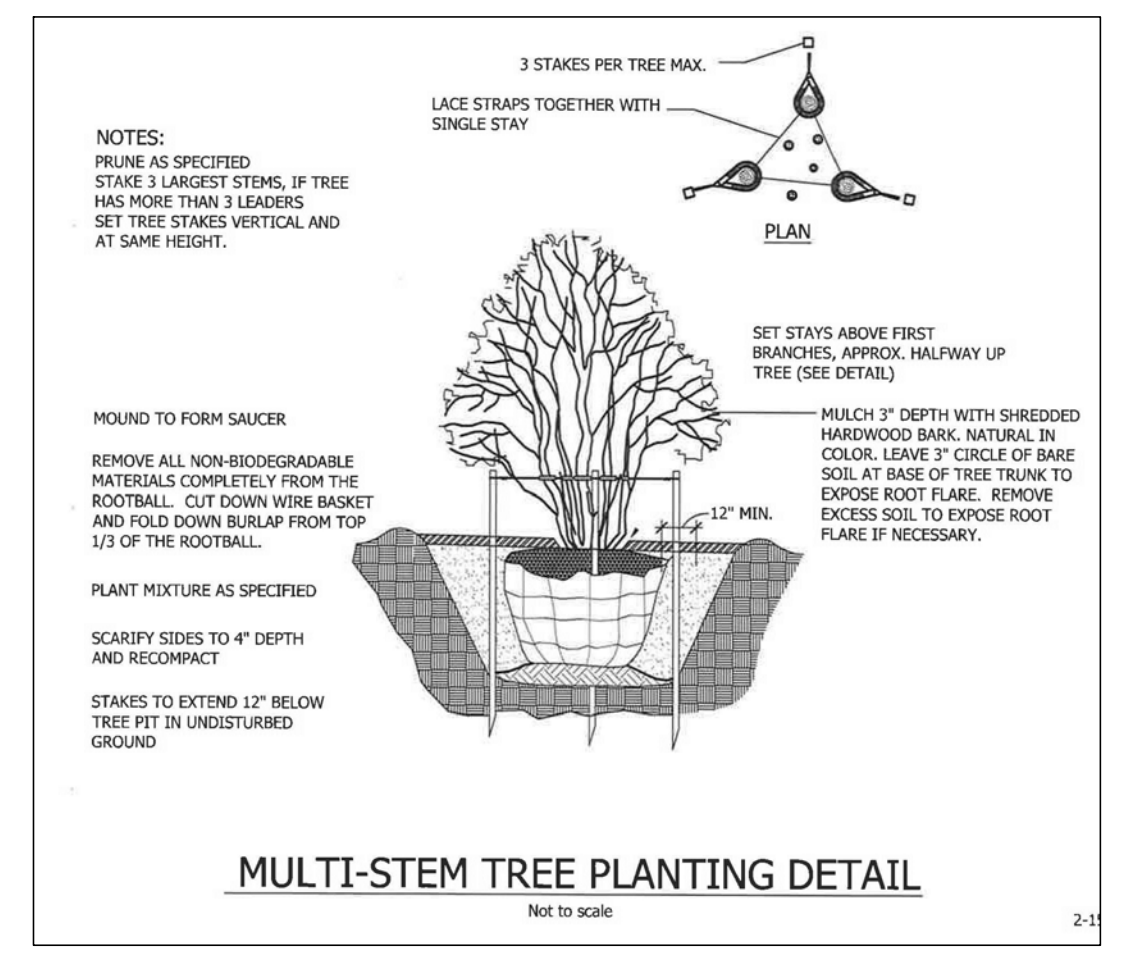
NFE JOB NO. SHEET NO.
1921-05 L3



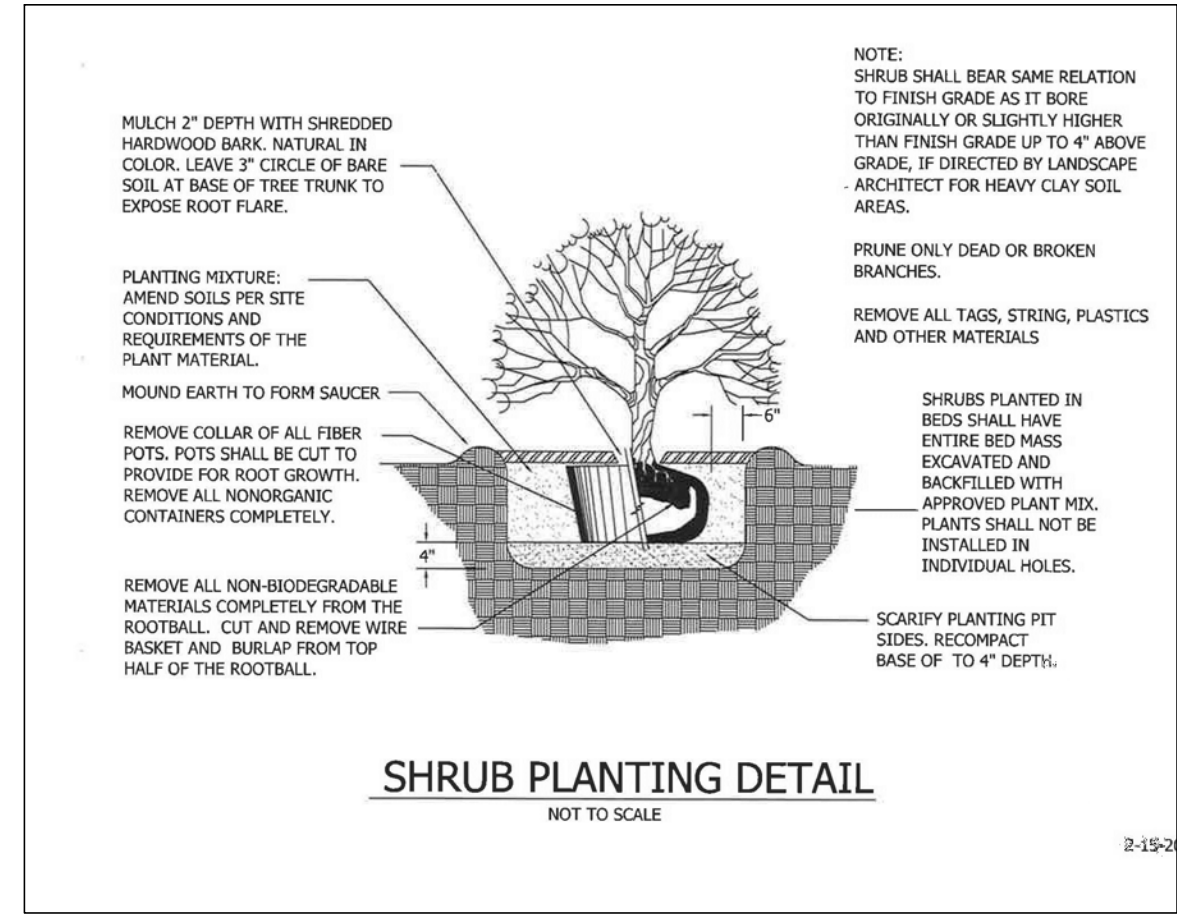
BASIS OF CALCULATION DIAGRAM

PLANT SCHEDULE

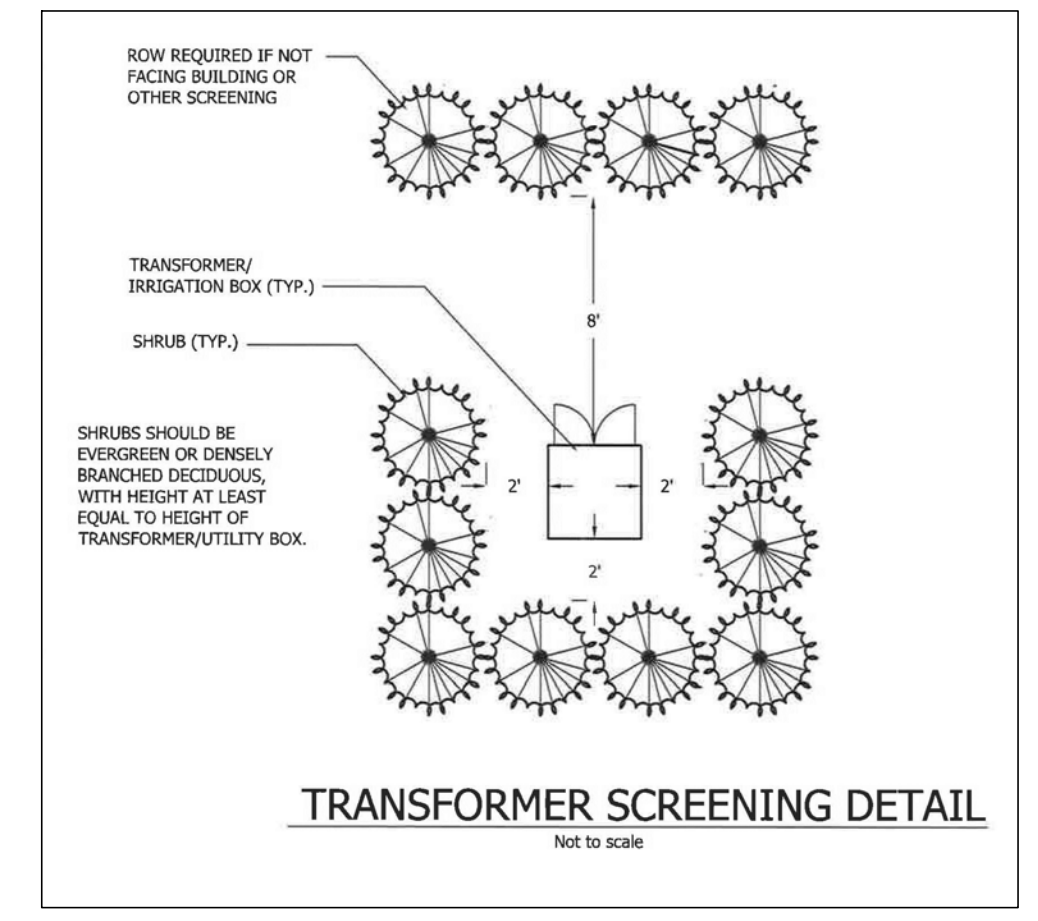
KEY	QTY	BOTANICAL/COMMON NAME	SIZE	SPACING	ROOT	COMMENT	COST ESTIMATE	GENUS/SPECIES
TREES								
AR	6	Acer rubrum 'Autumn Spire' / Autumn Spire Red Maple	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,400	13%/13%
BN	6	Betula nigra / River Birch	14' HT	SEE PLAN	B&B	CLUMP FORM	\$400/\$1,600	13%/13%
GB	6	Ginkgo biloba 'Magyar' / Magyar Ginkgo	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$1,200	13%/13%
GT	6	Gleditsia triacanthos 'Skyline' / Skyline Honey Locust	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,400	13%/13%
LS	6	Liquidambar styraciflua / Sweet Gum	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,400	13%/13%
LT	6	Liriodendron tulipifera / Tulip tree	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,400	13%/13%
NS	5	Nyssa sylvatica / Black Tupelo	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,400	11%/11%
TA	6	Tilia americana 'Continental Appeal' / Continental Apple Linden	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS	\$400/\$2,400	13%/13%
SHRUBS								
CS	28	Cornus sericea 'Kelsey' / Kelsey Redtwig Dogwood	3 GAL	30" OC	CONT		\$50/\$1,400	
DL	44	Diervilla lonicera 'Michigan Sunset' / Michigan Sunset Bush Honeysuckle	3 GAL	5" OC	CONT		\$50/\$2,200	
IG	108	Ilex glabra 'Chorman' / Nordic Holly	30" HT	30" OC	B&B		\$50/\$5,400	
PO	25	Physocarpus opulifolius 'Tiny Wine' / Tiny Wine Ninebark	30" HT	36" OC	B&B		\$50/\$1,250	
RH	76	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	30" HT	30" OC	CONT		\$50/\$3,800	
GROUNDCOVERS/PERENNIALS								
CA	140	Calamagrostis a. 'Overdam' / Vantage Red Feather Reed Grass	3 GAL	30" OC	CONT		\$15/\$2,100	
EP	132	Echinacea purpurea 'Cheyenne Spirit' / Cheyenne Spirit Coneflower	2 GAL	18" OC	CONT		\$15/\$1,980	
LS	291	Liriope spicata / Creeping Lilyturf	1 GAL	15" OC	CONT	TRIANGULAR SPACING	\$15/\$4,365	
MC	82	Molinis caerulea 'Mooflammé' / Mooflammé Purple Moor Grass	2 GAL	18" OC	CONT		\$15/\$1,230	
MISCELLANEOUS								
SEED	1,868	DURABLE BLENDED BLUEGRASS SEED MIX	SY				\$3/\$5,604	
MULCH	47	SHREDDED HARDWOOD BARK MULCH	CY				\$50/\$2,350	
IRR	153	IRRIGATION SYSTEM, COMPLETE	LS				\$15,000	



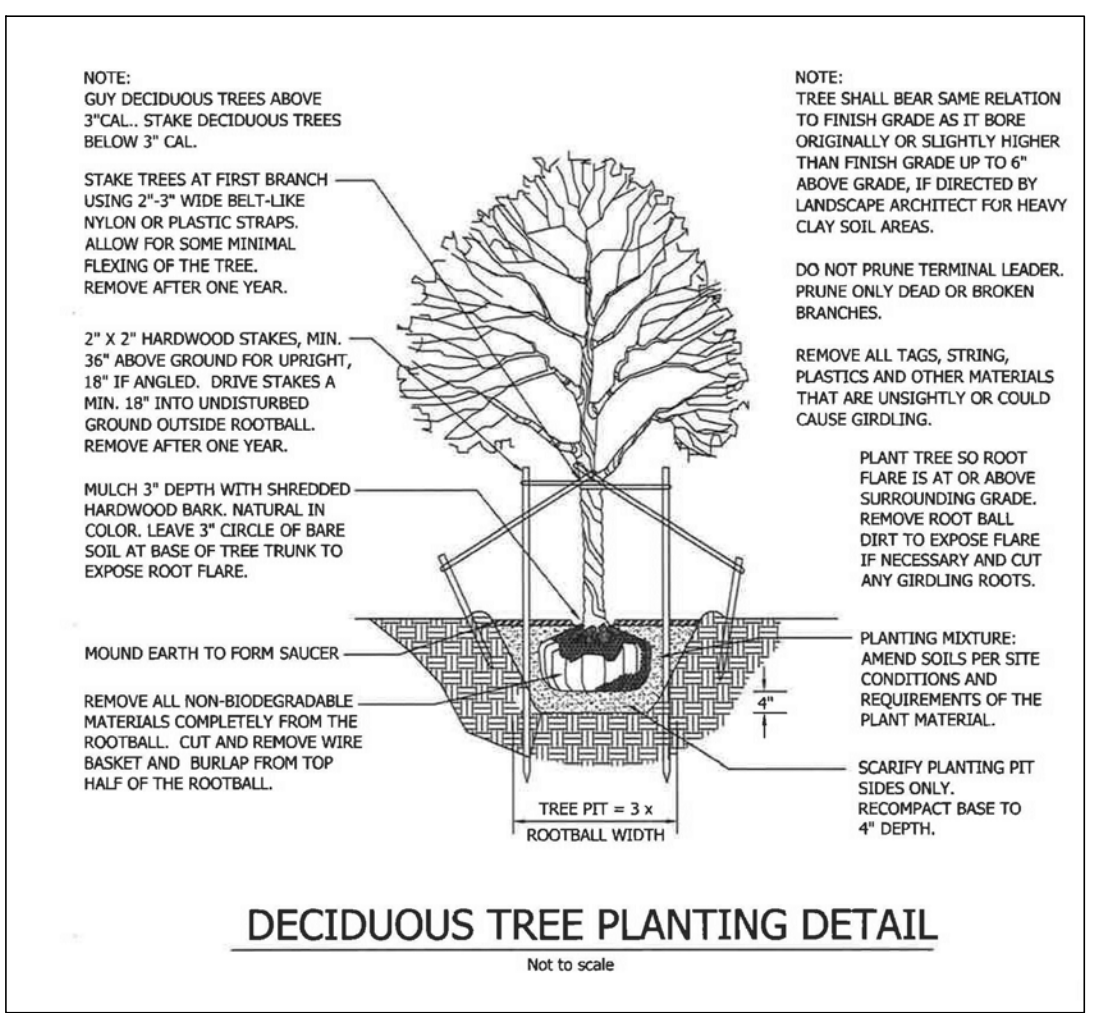
MULTI-STEM TREE PLANTING DETAIL



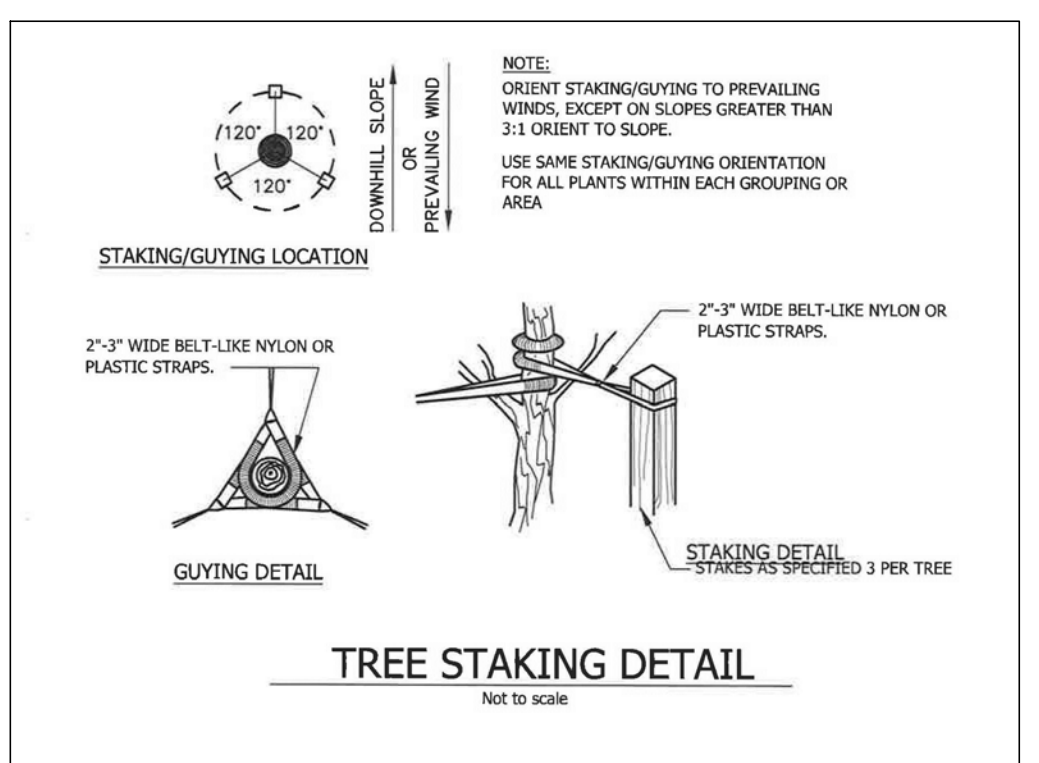
SHRUB PLANTING DETAIL



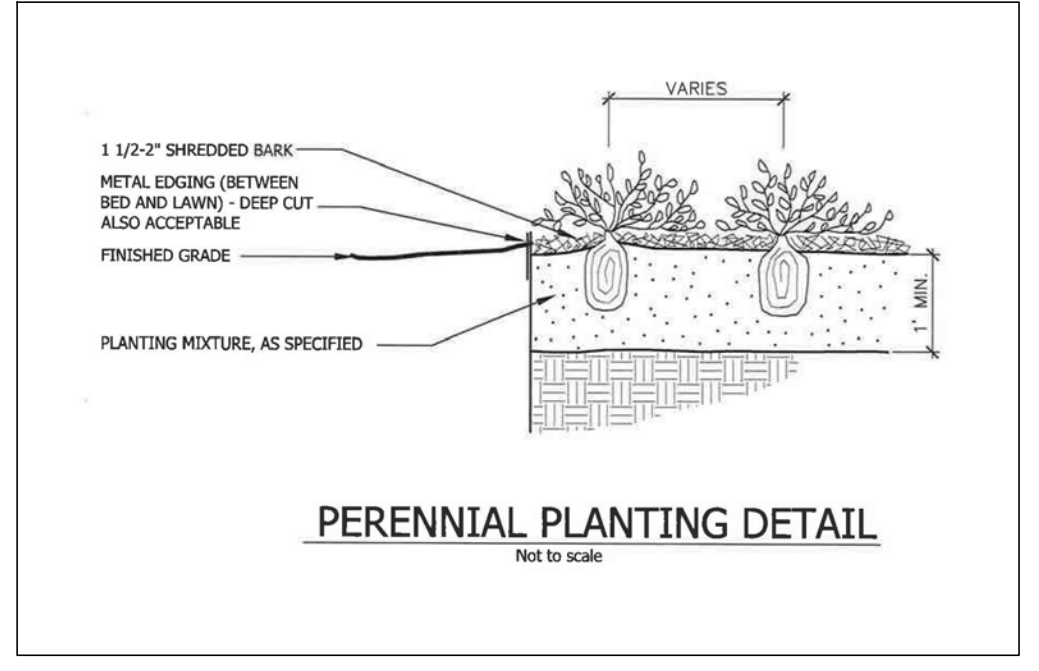
TRANSFORMER SCREENING DETAIL



DECIDUOUS TREE PLANTING DETAIL



TREE STAKING DETAIL



PERENNIAL PLANTING DETAIL

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D-Series Size 1 LED Wall Luminaire



Specifications Luminaire	Back Box (BBW, ELCW)
Width: 13-3/4" (349mm)	Width: 13-3/4" (349mm)
Weight: 12 lbs (5.4 kg)	Weight: 5 lbs (2.3 kg)
Depth: 10" (254mm)	Depth: 4" (102mm)
Height: 6-3/8" (163mm)	Height: 10 lbs (4.5 kg)

Category Number	Notes
Notes	Type

Introduction
The D-Series Wall Luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance. With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DBDXTD

Symbol	LED	Wattage	Color Temperature	Beam Spread	Mounting	Control System
DSXW1 LED	1000	1000	4000K	30°	Wall Mount	MVOLT

Shipped installed	Shipped separately	Notes
SPF Single line (120, 277 or 480V)	BBW Back box	1. 20C 1000 is not available with PIR, PIR-HCV or PIR-HCV-2.
DF Double line (208, 240 or 480V)	WG Wire guard	2. MVOLT is not available on any voltage from 120/277/500Vdc.
HS Phase-to-phase protection	DNAD Noise abatement	3. Single line (SP) requires 120, 277 or 347 voltage option. Double line (DL) requires 208, 240 or 480 voltage option.
SPD Surge protector	DWNGD Grounding	4. Only available with 20C, 7000k or 10000k. Not available with PIR or PIR-H.
		5. Back box ships installed on fixture. Cannot be ordered as an accessory.
		6. Photocell (PT) requires 120, 208, 240, 277 or 347 voltage option. Not available with photocell sensor (PIR or PIR-H).
		7. Reference Manual Sensor table on page 3.
		8. Cold weather (20C) rated. Not compatible with conduit entry applications. Not available with BIMV mounting option. Not available with 347 or 480V voltage options. Emergency components located at back box housing. Emergency mode (ES) item located on product page at 20.
		9. Not available with ELCW.
		10. Also available as a separate accessory, see Accessories information.

LITHONIA LIGHTING
One Lithonia Way • Conyers, Georgia 30012 • Phone: 800-279-5041 • FAX: 770-932-1188
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D-Series Size 2 LED Area Luminaire



Specifications
EPA: 1.06 ft ² (0.10 m ²)
Length: 40.59" (1031 mm)
Width: 16.76" (425 mm)
Height H1: 8.11" (206 mm)
Height H2: 3.96" (100 mm)
Weight: 44.5 lbs (20.2 kg)

Category Number	Notes
Notes	Type

Introduction
The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of up to 80% vs. 1000W HID and expected service life of over 100,000 hours.

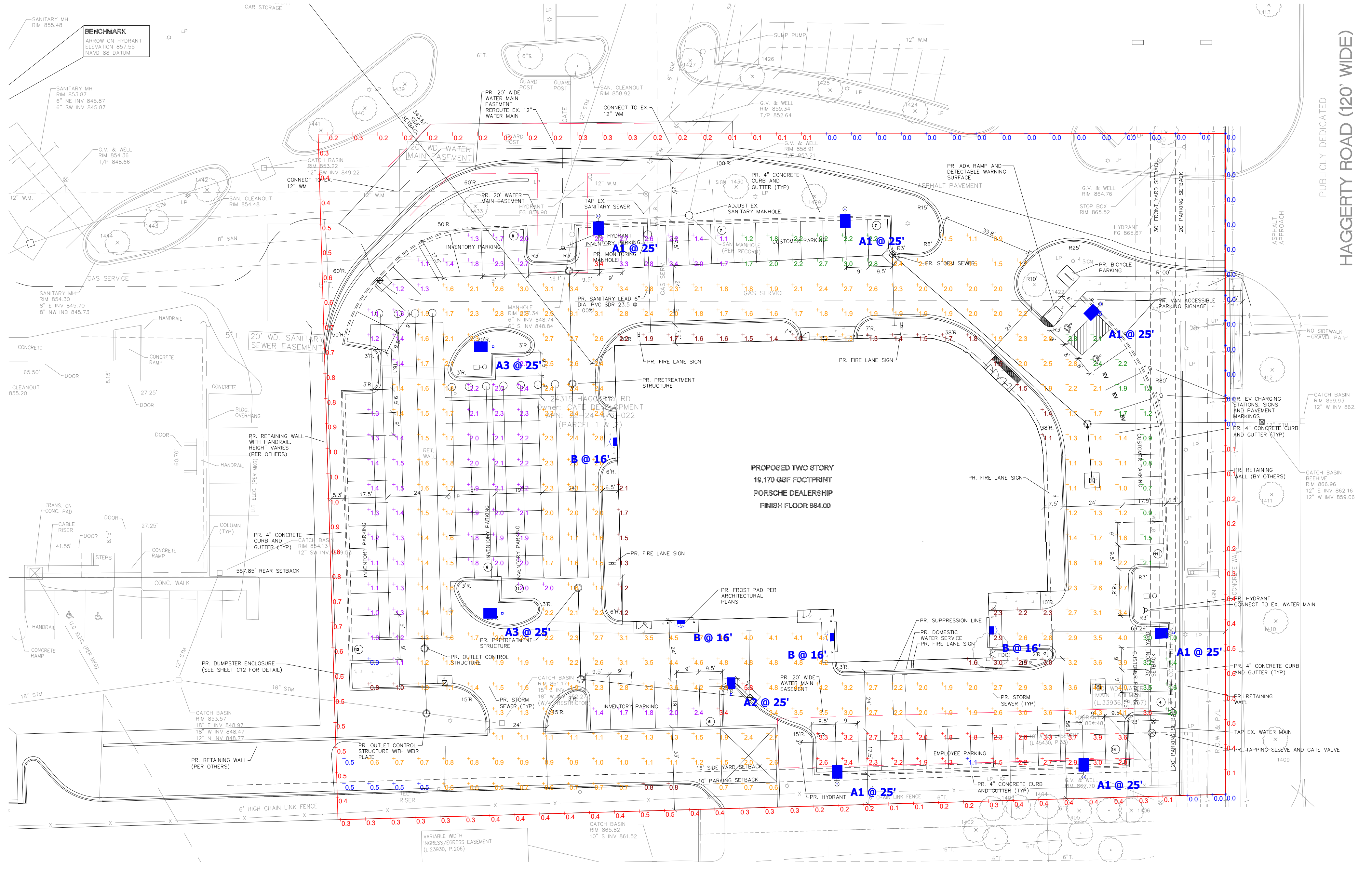
Ordering Information

EXAMPLE: DSX2 LED P7 40K 70CRI T3M MVOLT SPA NLAIR2 PIRHN DBDXTD

Symbol	LED	Wattage	Color Temperature	Beam Spread	Mounting	Control System
DSX2 LED	P7	7000	4000K	30°	Wall Mount	MVOLT

Shipped installed	Shipped separately	Notes
SPF Single line (120, 277 or 480V)	BBW Back box	1. 7000 is not available with PIR, PIR-HCV or PIR-HCV-2.
DF Double line (208, 240 or 480V)	WG Wire guard	2. MVOLT is not available on any voltage from 120/277/500Vdc.
HS Phase-to-phase protection	DNAD Noise abatement	3. Single line (SP) requires 120, 277 or 347 voltage option. Double line (DL) requires 208, 240 or 480 voltage option.
SPD Surge protector	DWNGD Grounding	4. Only available with 7000k or 10000k. Not available with PIR or PIR-H.
		5. Back box ships installed on fixture. Cannot be ordered as an accessory.
		6. Photocell (PT) requires 120, 208, 240, 277 or 347 voltage option. Not available with photocell sensor (PIR or PIR-H).
		7. Reference Manual Sensor table on page 3.
		8. Cold weather (20C) rated. Not compatible with conduit entry applications. Not available with BIMV mounting option. Not available with 347 or 480V voltage options. Emergency components located at back box housing. Emergency mode (ES) item located on product page at 20.
		9. Not available with ELCW.
		10. Also available as a separate accessory, see Accessories information.

LITHONIA LIGHTING
One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • FAX: 770-932-1188
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Plan View
Scale - 1" = 25ft

General Note

- SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
- SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTOR.
- CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
- HOURS OF OPERATION: 24 HOURS PER DAY & 7 DAYS A WEEK.
- ELECTRICAL SERVICE TO LIGHT FIXTURES SHALL BE PLACED UNDERGROUND.
- FLASHING LIGHT SHALL NOT BE PERMITTED.
- ONLY NECESSARY LIGHTING FOR SECURITY PURPOSES & LIMITED OPERATIONS SHALL BE PERMITTED AFTER A SITE'S HOURS OF OPERATION.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

Alternates Note

THE USE OF FIXTURE ALTERNATES MUST BE RESUBMITTED TO THE CITY FOR APPROVAL.

Ordering Note

FOR INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

Mounting Height Note

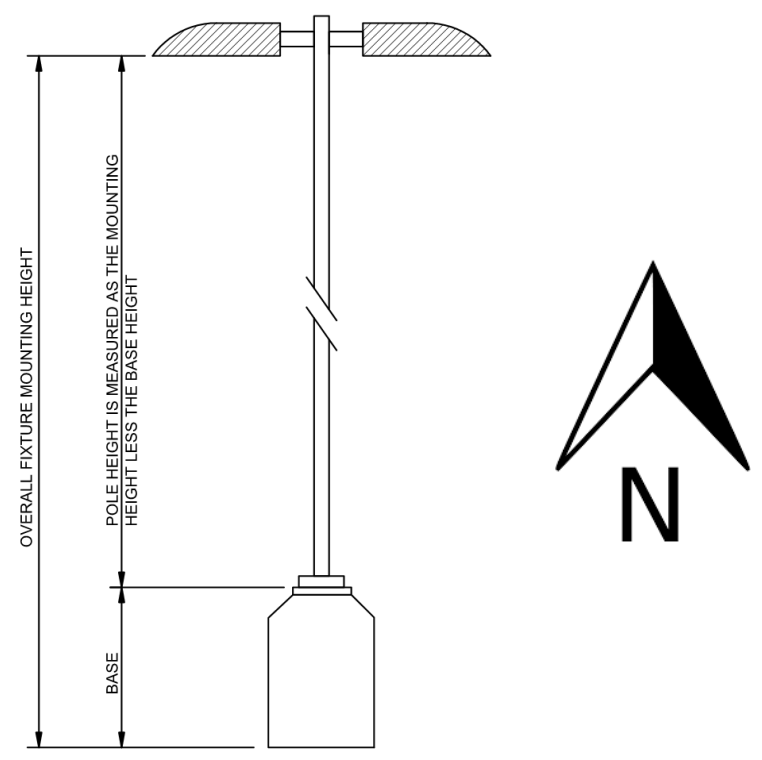
MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

Drawing Note

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

Symbol	Label	QTY	Manufacturer	Description	Lamp	Mounting Height
□	A1	6	Lithonia Lighting	DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
□	A2	1	Lithonia Lighting	DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
□	A3	2	Lithonia Lighting	DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
□	B	4	Lithonia Lighting	DSXW1 LED BUILDING MOUNTED LIGHT, 4000K	LED	16'-0"

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
EMPLOYEE PARKING	+	2.5 fc	3.9 fc	1.1 fc	3.5:1	2.3:1	0.6:1
INVENTORY PARKING	+	1.8 fc	3.4 fc	0.9 fc	3.8:1	2.0:1	0.5:1
PROPERTY LINE - HAGGERTY ROAD	+	0.2 fc	0.6 fc	0.0 fc	N/A	N/A	0.3:1
PROPERTY LINE - NON R.O.W. AREA	+	0.3 fc	1.0 fc	0.0 fc	N/A	N/A	0.3:1
SITE CIRCULATION	+	2.2 fc	5.8 fc	0.5 fc	11.6:1	4.4:1	0.4:1
CUSTOMER PARKING	+	2.0 fc	3.6 fc	0.6 fc	6.0:1	3.3:1	0.6:1



LITHIA - PORSCHE OF NOVI
PHOTOMETRIC SITE PLAN
PREPARED FOR: NOWAK & FRAUS ENGINEERS
GASSER BUSH ASSOCIATES
WWW.GASSERBUSH.COM

GROSS BUILDING AREA		
FIRST FLOOR		19,152 SF
SECOND FLOOR		1,666 SF
TOTAL BUILDING AREA (GSF)		20,819 SF
DEPARTMENT AREA BY FLOOR		
DEPARTMENT	LEVEL	AREA (NSF)
ADMIN	FIRST FLOOR	180 SF
OFFICE AND OTHER	FIRST FLOOR	1,563 SF
PARTS	FIRST FLOOR	1,382 SF
PARTS	MEZZANINE	1,503 SF
SERVICE	FIRST FLOOR	2,885 SF
SERVICE OFFICE/OTHER	FIRST FLOOR	6,928 SF
SERVICE OFFICE/OTHER	FIRST FLOOR	2,440 SF
SHOWROOM	FIRST FLOOR	2,440 SF
SHOWROOM	FIRST FLOOR	5,358 SF
TOTAL (NSF)		19,354 SF



FIRST FLOOR PLAN - COMPOSITE
 3/32" = 1'-0"

- DEALERSHIP ZONES**
- ADMIN
 - SHOWROOM
 - OFFICE AND OTHER
 - SERVICE
 - SERVICE OFFICE/OTHER
 - PARTS

2041 - Lithia Suburban Porsche Novi		Guideline Date 12/7/21			
		PCNA's Minimum Requirements		Proposed Design	
Total Showroom		Manufacturer Requirements		Vehicles	
		Vehicles	Area (SF)	Vehicles	Area (SF)
Showroom Display - New Cars		2	400	4	399
Showroom Display - Pre-Owned Cars		3	0	1	734
Total Showroom Vehicle Display		5	400	5	1133
Work Stalls		6	0	6	0
Alignment Stalls		1	0	1	0
Flat Bay for Battery Repair		1	0	1	0
Wash Stalls		1	0	1	0
Total Workshop Stall Count		9	0	9	0
Total Parking Count		83	0	90	0
		Space Requirement Breakdown		Proposed Design	
Showroom	Manufacturer Requirements	Area (SF)	Vehicles	Units	Area (SF)
Required Showroom Modules					
Welcome Module		1	400	1	399
Fitting Lounge Combined w/ Owner's Collection		0	0	1	734
Boutique Module		1	250	1	235
Highlight Module		1	565	1	552
Owner's Collection Module		1	650	1	638
Porsche Approved		1	400	1	398
Classic Mini		1	400	1	405
Equipment Module		1	230	1	221
Porscheplatz Module		1	400	1	434
Showroom		1	400	1	1345
Optional Showroom Modules					
Work 1 Module		0	0	0	0
Flex Module (New Car)		0	0	0	0
Classic Partner Module		0	0	0	0
e-Performance Module		0	0	1	409
Total Showroom Modules		4	3,295	5	5,132
Total Vehicles & Modules					
Additional Showroom New Vehicle Display Req'd		1	315	1	320
Additional Showroom Pre-Owned Display Req'd		0	0	0	0
Total Showroom Vehicle Count		5	0	6	0
Office & Other					
Sales Manager Office		1	150	1	208
Pre-Owned Manager Office		0	0	0	175
F&I Manager Office		1	150	1	175
Sales Office		2	300	3	503
Bulpen		250	0	0	0
Restrooms/Janitor		450	0	0	422
Storage		100	0	0	0
Stairs/Elevator		200	0	0	0
Circulation		278	0	0	109
Vestibule		0	0	0	96
Conference		0	0	0	214
Total Office and Other		1,878	0	1,727	0
Administration					
Dealer/General Manager Office		1	265	0	0
General Office Area		0	225	0	0
Sales Break Room		0	150	0	0
Business Manager Office Area		1	150	0	0
Key/Admin Storage		1	100	0	112
Administration Storage Area		1	50	0	94
IT Room		0	0	0	206
Total Administration		790	0	206	0
Total Showroom		6,278	0	7,385	0
		Manufacturer Requirements		Proposed Design	
Service	Units/Stalls	Area (SF)	Units/Stalls	Area (SF)	Area (SF)
Work Stalls	6	1728	8	2093	0
Alignment Stalls	1	512	1	521	0
Flat Bay for Battery Repair	1	400	1	359	0
Wash Stalls	1	336	1	347	0
Aisles	1	1584	1	1602	0
Unit & Tool /Engine Repair Room	0	800	0	839	0
Service Storage Room	0	400	0	417	0
Circulation	0	0	0	773	0
Oil/Compressor	0	0	0	155	0
Total Workshop Stall Count	9	5,760	10	7,106	0
Service Manager Office	1	150	1	165	0
Service Advisors Office	1	150	2	324	0
Covered Service Drive	1	1200	0	1256	0
Loaner Staging	0	300	0	0	0
Photo Booth (300 Photo Booth is min. 1,000 SF)	To be located on dealer campus	0	0	0	0
Warranty/Dispatch	0	100	0	0	0
Break Room	0	250	0	361	0
Lockers/Restrooms	0	120	0	227	0
Clerical	0	100	0	45	0
Porter Storage	0	100	0	45	0
Circulation	0	0	0	196	0
Total Service Office and Other	2	2,370	3	2,574	0
Retail and Cashier (Genuine Parts)	1	100	0	155	0
Parts Manager Office	1	150	0	180	0
Parts Storage	1	1600	0	1860	0
Parts Shipping/Receiving	0	300	0	276	0
Secure Storage	0	0	0	173	0
Customer Storage	0	0	0	320	0
Tech Parts	0	0	0	113	0
Circulation	0	0	0	87	0
Total Parts	2	2,150	0	2,984	0
Total Service & Parts		10,280		12,664	0
Total Facility Minimum		16,558		20,049	0
		Manufacturer Requirements		Proposed Design	
Lot Space	Vehicles	Area (SF)	Vehicles	Area (SF)	Area (SF)
Exterior Display - New Cars	22	4400	29	5800	0
Exterior Display - Pre-Owned Cars	7	1400	7	1400	0
Customer Parking	4	800	6	1200	0
Parts Parking	2	400	2	400	0
Service Vehicles	24	4800	24	4800	0
Employee Parking - Sales	8	1600	8	1600	0
Employee Parking - AfterSales	12	2400	12	2400	0
Mobility Parking	4	800	2	400	0
Parts Return Building/Dumpster Receptacle	0	600	0	200	0
Lot Circulation - Sales	0	4100	0	4100	0
Lot Circulation - AfterSales	0	3800	0	3800	0
Minimum 20% parking required onsite	17	5,020	18	5,220	0
Total Lot Space	83	25,100	90	26,100	0
Grand Total Land and Facility Minimum		41,658		46,149	0

DO NOT SCALE DRAWINGS

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01.11.23 SITE PLAN RESUBMITTAL

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PROJECT 2041

SUBURBAN PORSCHE OF NOVI
 24315 HAGGERTY RD
 NOVI, MI 48375

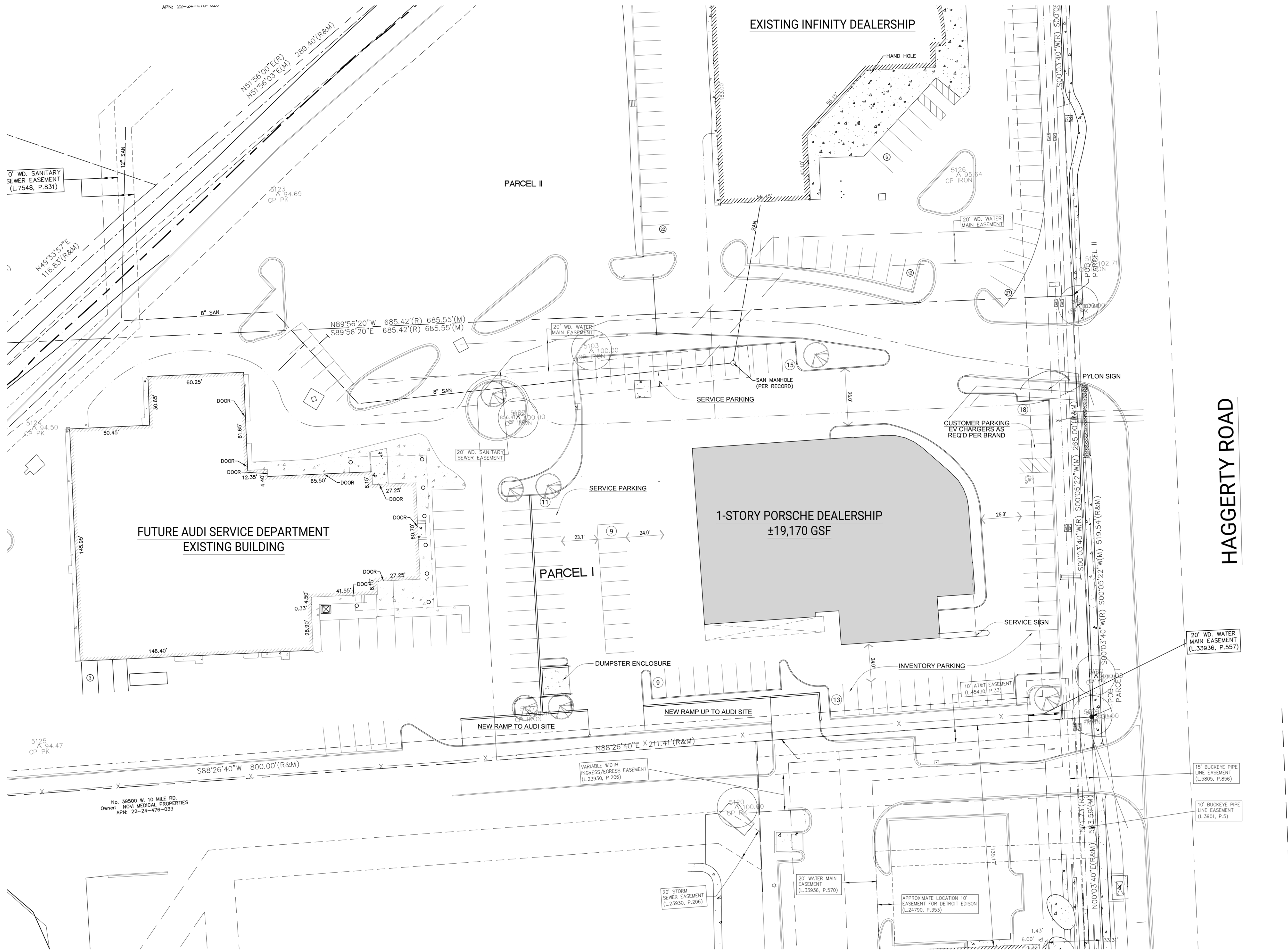
COMPOSITE FLOOR PLAN

TS1.4

MEZZANINE PLAN - COMPOSITE
 3/32" = 1'-0"

Update 12/2/2022

SITE DATA	
CITY OF NOVI, MI	
SITE AREA	
SITE AREA TOTAL	±2.17 ACRES
ZONING	
B-3 GENERAL BUSINESS DISTRICT	
REQ'D FRONT SETBACK	30 FEET
REQ'D REAR SETBACK	20 FEET
REQ'D SIDE YARD SETBACK MIN	15 FEET
MAX BUILDING HEIGHT	30 FEET
BUILDING AREAS	
PORSCHE (PROPOSED)	25,371 SF
VEHICLE DEALERSHIP, SALES AND SERVICE	
DEDICATED PARKING=	75 SPACES



HAGGERTY ROAD

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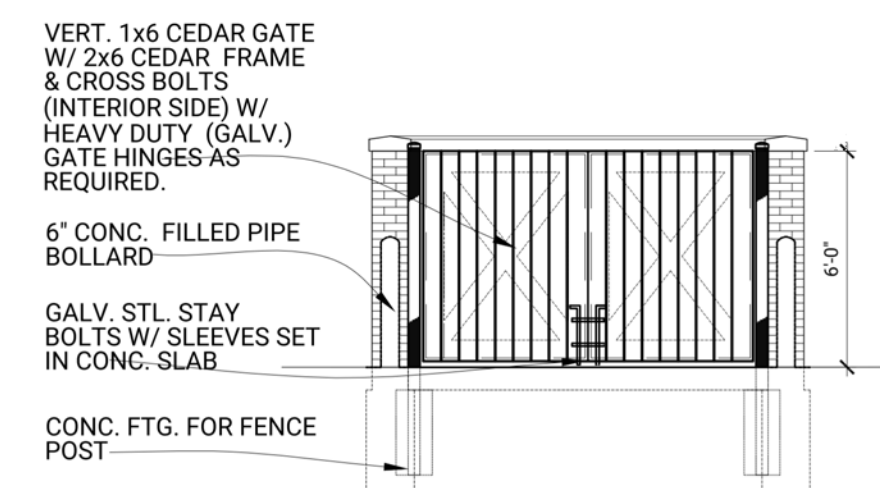
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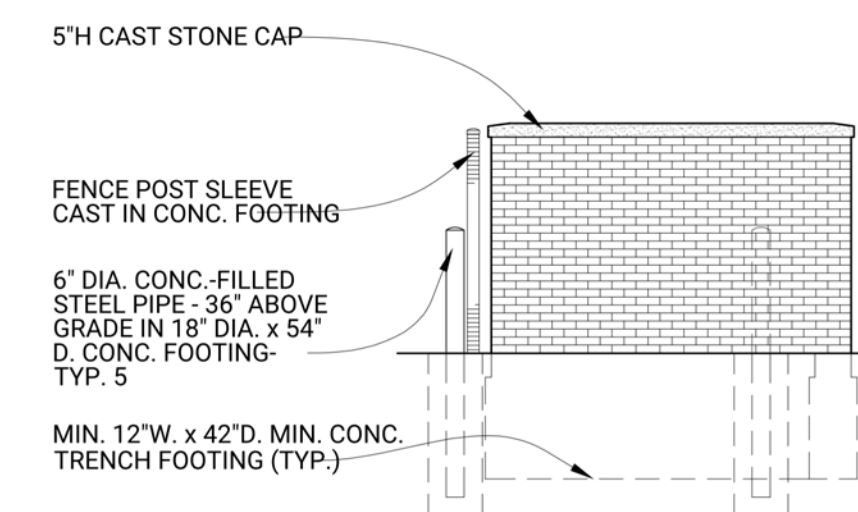
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SITE DETAILS

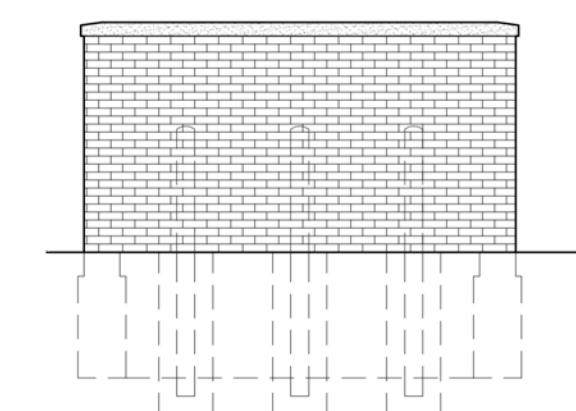
SP1.2



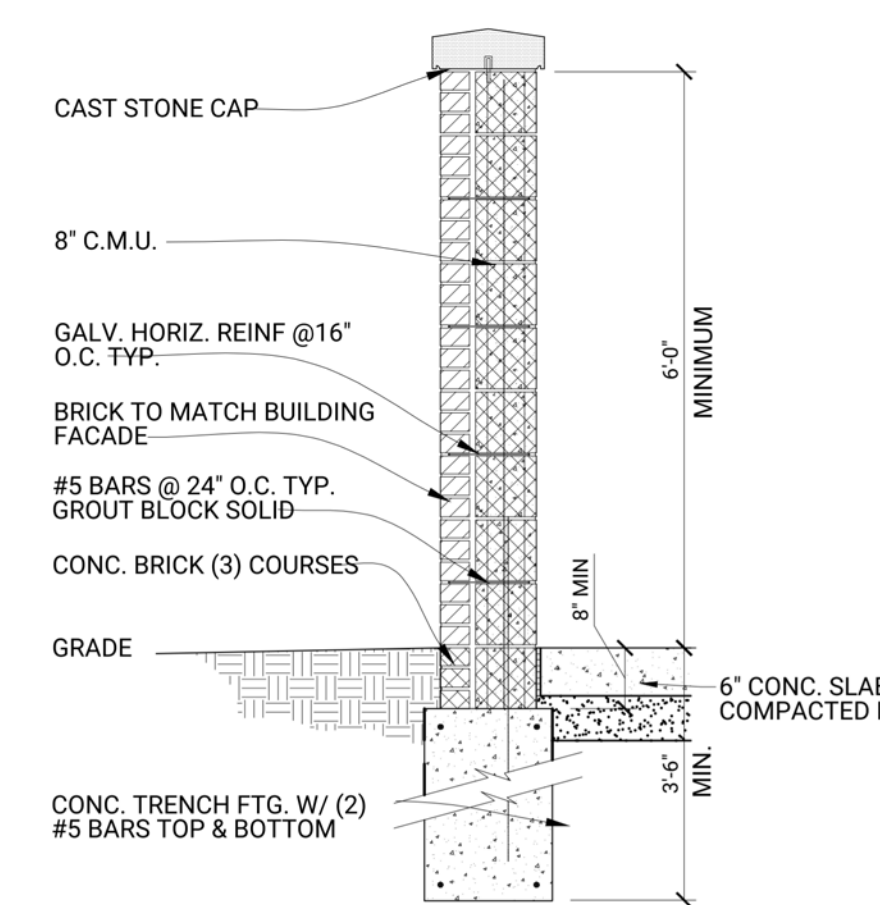
5 DUMPSTER ENCLOSURE ELEVATION
SP1.1 SCALE: 3/16" = 1'-0" @FRONT



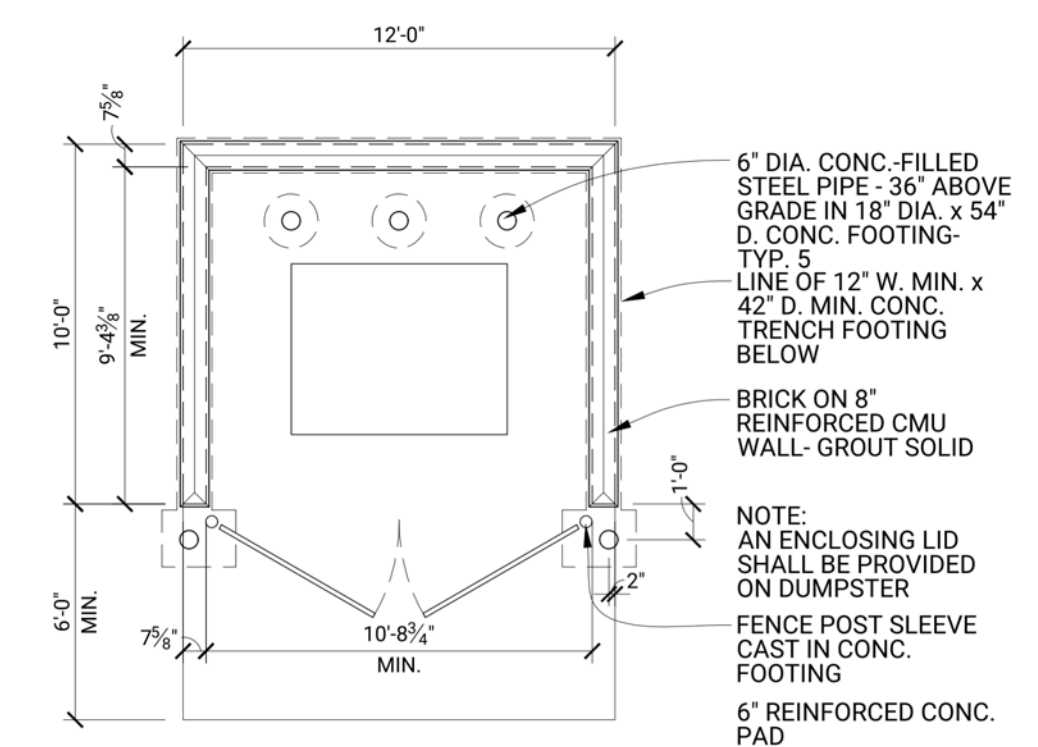
4 DUMPSTER ENCLOSURE ELEVATION
SP1.1 SCALE: 3/16" = 1'-0" @SIDES



3 DUMPSTER ENCLOSURE ELEVATION
SP1.1 SCALE: 3/16" = 1'-0" @REAR



2 DUMPSTER ENCLOSURE SECTION
SP1.1 SCALE: 3/16" = 1'-0"



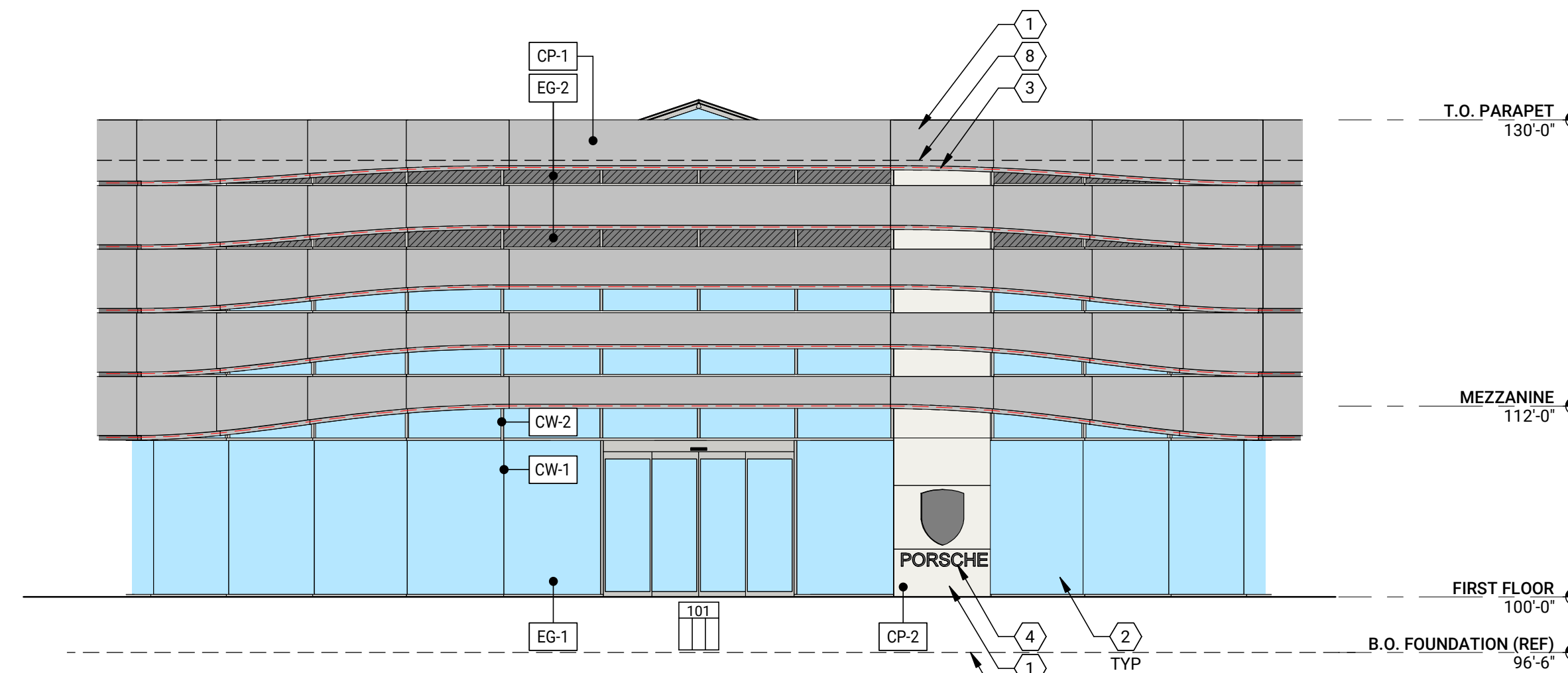
1 DUMPSTER ENCLOSURE PLAN
SP1.1 SCALE: 3/16" = 1'-0"

EXTERIOR MATERIAL KEY

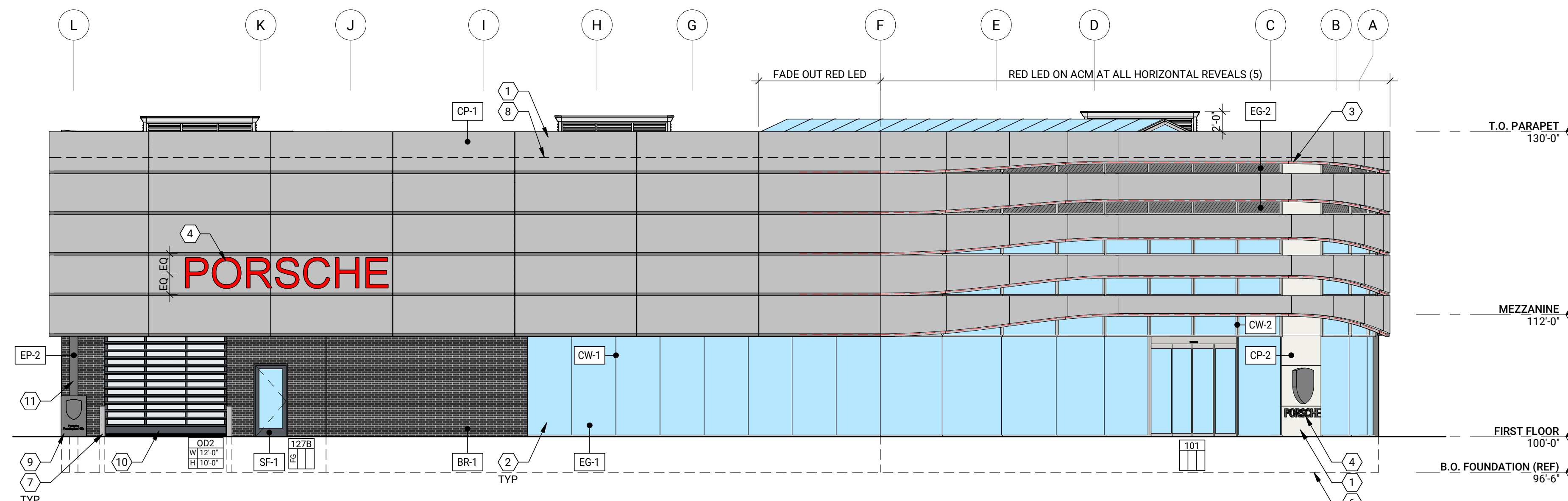
PATTERN	MARK	MATERIAL	DESCRIPTION
	CP-1	ALUMINUM COMPOSITE MATERIAL	ALUCOBOND - SUNRISE SILVER #AB022
	CP-2	ALUMINUM COMPOSITE MATERIAL	ALUCOBOND - PURE WHITE #AB094
	BR-1	MASONRY BRICK	GLEN-GERY - CHARCOAL KLAYCOAT (K13-3063)
	MC-1	PRE-FINISHED METAL COPING	ALUCOBOND - BLACK ANODIZED #AB435
	EP-1	EXTERIOR PAINT/ ELASTOMERIC COATING	SHERWIN WILLIAMS - CYBERSPACE #7076, SEMIGLOSS
	EP-2	EXTERIOR PAINT	SHERWIN WILLIAMS - CUSTOM #02 32 64 128, BONDPLEX ALUM.
	CW-1	FRAMELESS CURTAINWALL SYSTEM	FRAMELESS GLASS w/ BLACK SEALANT AT VERTICAL JOINTS, USE EG-1
	CW-2	CURTAINWALL / SKYLIGHT FRAME	OLDCASTLE - 215 CLEAR CLASS I
	SF-1	STOREFRONT FRAME	OLDCASTLE - 706 BLACK
	EG-1	VISION GLASS	VITRO SOLARBAN 72 w/ STARPHIRE GLASS OR EQUAL
	EG-2	SPANDREL GLASS	OLDCASTLE - BLACK SPANDREL

**EXTERIOR ELEVATION KEY NOTES:
(TYPICAL THIS SHEET ONLY)**

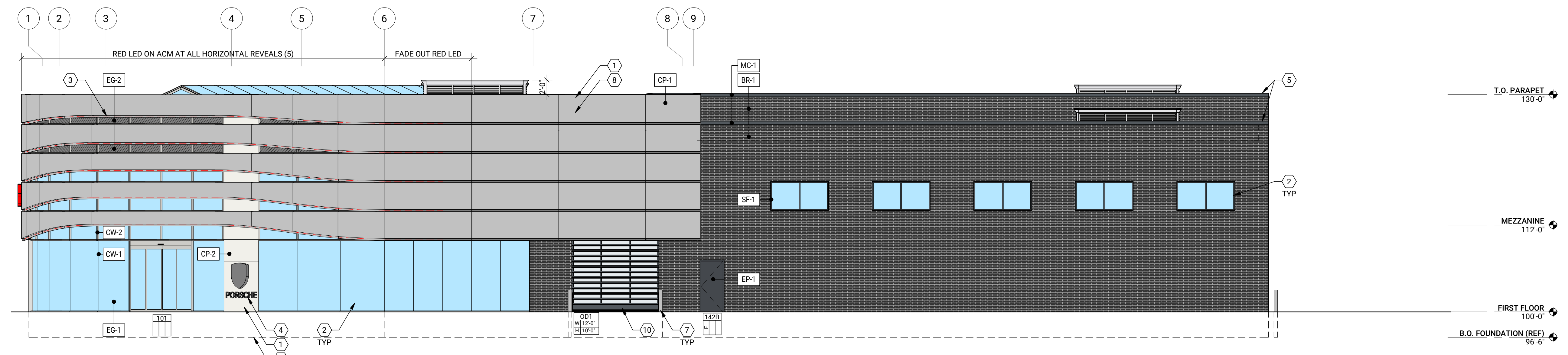
- ① ALUMINUM COMPOSITE PANEL (RAINSREEN w/ DRY JOINT) w/ 1/2" VERTICAL REVEAL; SEE MATERIAL FINISH SCHEDULE
- ② GLASS AND ALUMINUM STOREFRONT / CURTAINWALL SYSTEM; SEE FRAME ELEVATIONS
- ③ RED LED STRIP
- ④ BUILDING MOUNTED SIGNAGE; COORDINATE POWER REQUIREMENTS w/ APPROVED SIGNAGE DRAWINGS
- ⑤ PREFINISHED METAL COPING TO MATCH BR-1
- ⑥ INDICATES LINE OF CONCRETE FOUNDATION, SEE STRUCTURAL
- ⑦ 6' CONC. FILLED STL. BOLLARD, PRIMED W/ PLASTIC COVER
- ⑧ INDICATES LINE OF ROOF BEYOND
- ⑨ GROUND MOUNTED SIGNAGE; COORDINATE POWER REQUIREMENTS w/ APPROVED SIGNAGE DRAWINGS
- ⑩ BLACK ANODIZED COILING OVERHEAD DOOR WITH INSULATED GLAZING
- ⑪ STEEL COLUMN; PRIME & PAINT



3 FRONT ENTRY ELEVATION
1/8" = 1'-0"



2 EAST ELEVATION
1/8" = 1'-0"



1 NORTH ELEVATION
1/8" = 1'-0"

DO NOT SCALE DRAWINGS

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01.11.23 SITE PLAN RESUBMITTAL

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EXTERIOR ELEVATIONS

A2.1

NORTHEAST FACADE EXT. MAT. CALCS - TOTAL AREA 1,256 S.F.

MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	0 S.F.	0%
SPANDREL GLASS	50% MAX	90 S.F.	7.2%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)	50% MAX	1,166 S.F.	92.8%
MECHANICAL SCREEN		0 S.F.	0%

SOUTH FACADE EXT. MAT. CALCS - TOTAL AREA 4,896 S.F.

MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	4,334 S.F.	88.5%
PERFORATED METAL PANEL ON ACM	50% MAX	0 S.F.	0.0%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)		522 S.F.	10.7%
MECHANICAL SCREEN		40 S.F.	0.8%

EAST FACADE EXT. MAT. CALCS - TOTAL AREA 2,018 S.F.

MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	313 S.F.	15.5%
PERFORATED METAL PANEL ON ACM	50% MAX	0 S.F.	0.0%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)		1,646 S.F.	81.6%
MECHANICAL SCREEN		59 S.F.	2.9%

NORTH FACADE EXT. MAT. CALCS - TOTAL AREA 3,199 S.F.

MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	2,253 S.F.	70.4%
PERFORATED METAL PANEL ON ACM	50% MAX	0 S.F.	0.0%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)		870 S.F.	27.2%
MECHANICAL SCREEN		76 S.F.	2.4%

WEST FACADE EXT. MAT. CALCS - TOTAL AREA 3,687 S.F.

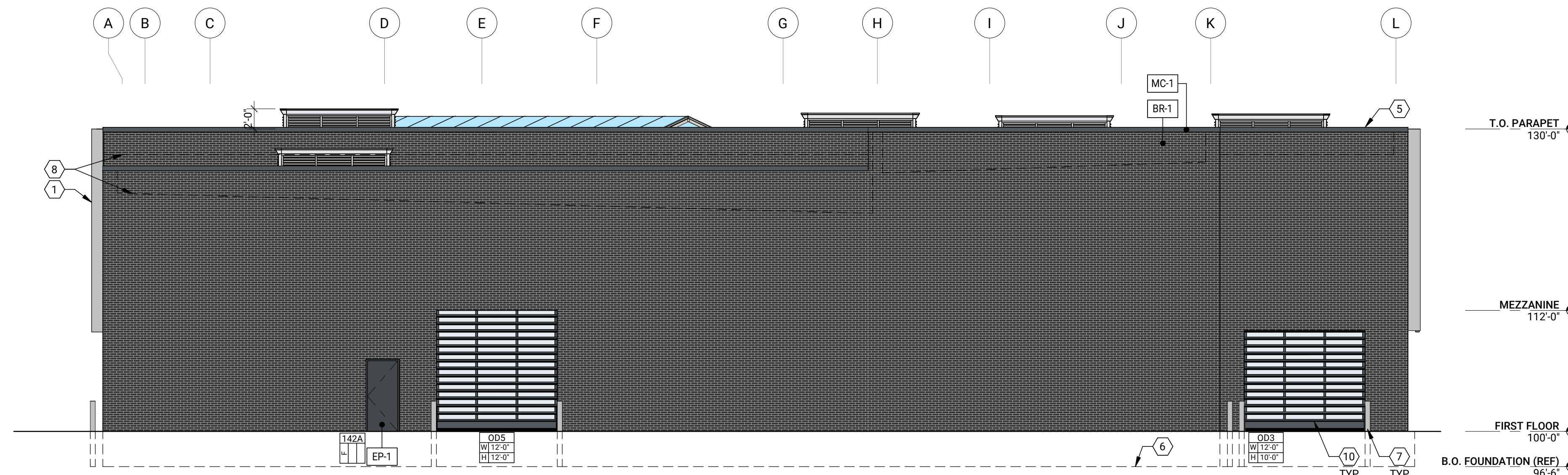
MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	3,594 S.F.	97.5%
PERFORATED METAL PANEL ON ACM	50% MAX	0 S.F.	0.0%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)		0 S.F.	0.0%
MECHANICAL SCREEN		93 S.F.	2.5%

EXTERIOR MATERIAL KEY

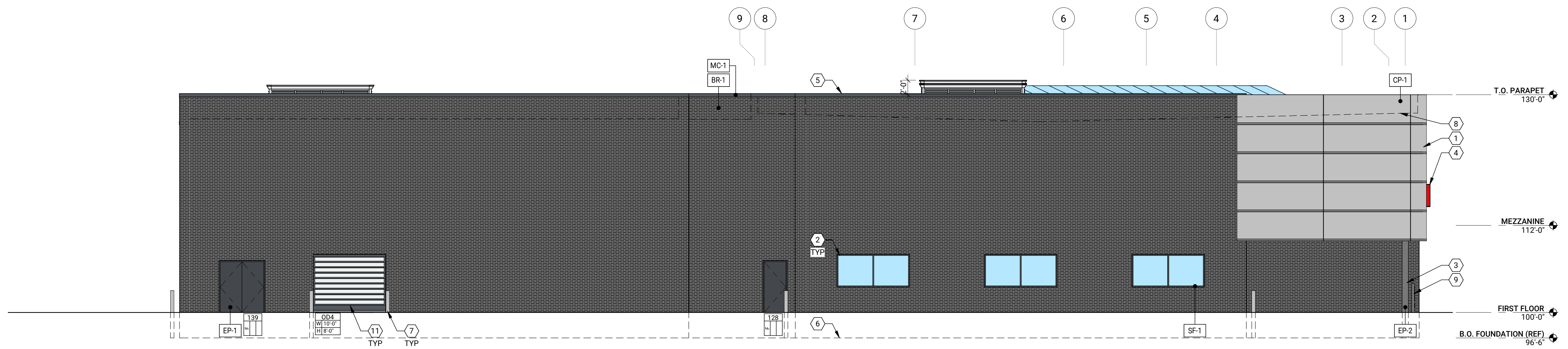
PATTERN	MARK	MATERIAL	DESCRIPTION
[Pattern]	CP-1	ALUMINUM COMPOSITE MATERIAL	ALUCOBOND - SUNRISE SILVER #AB022
[Pattern]	CP-2	ALUMINUM COMPOSITE MATERIAL	ALUCOBOND - PURE WHITE #AB094
[Pattern]	BR-1	MASONRY BRICK	GLEN-GERY - CHARCOAL KLAYCOAT (K13-3063)
[Pattern]	MC-1	PRE-FINISHED METAL COPING	ALUCOBOND - BLACK ANODIZED #AB435
[Pattern]	EP-1	EXTERIOR PAINT/ ELASTOMERIC COATING	SHERWIN WILLIAMS - CYBERSPACE #7076, SEMI-GLOSS
[Pattern]	EP-2	EXTERIOR PAINT	SHERWIN WILLIAMS - CUSTOM #02 32 64 128, BONDPLEX ALUM.
[Pattern]	CW-1	FRAMELESS CURTAINWALL SYSTEM	FRAMELESS GLASS w/ BLACK SEALANT AT VERTICAL JOINTS, USE EG-1
[Pattern]	CW-2	CURTAINWALL / SKYLIGHT FRAME	OLDCASTLE - 215 CLEAR CLASS I
[Pattern]	SF-1	STOREFRONT FRAME	OLDCASTLE - 706 BLACK
[Pattern]	EG-1	VISION GLASS	VITRO SOLARBAN 72 w/ STARPPIRE GLASS OR EQUAL
[Pattern]	EG-2	SPANDREL GLASS	OLDCASTLE - BLACK SPANDREL

**EXTERIOR ELEVATION KEY NOTES:
(TYPICAL THIS SHEET ONLY)**

- ALUMINUM COMPOSITE PANEL (RAINSCREEN w/ DRY JOINT) w/ 1/2" VERTICAL REVEAL; SEE MATERIAL FINISH SCHEDULE
- GLASS AND ALUMINUM STOREFRONT / CURTAINWALL SYSTEM; SEE FRAME ELEVATIONS
- STEEL COLUMN; PRIME & PAINT
- BUILDING MOUNTED SIGNAGE; COORDINATE POWER REQUIREMENTS w/ APPROVED SIGNAGE DRAWINGS
- PREFINISHED METAL COPING TO MATCH BR-1
- INDICATES LINE OF CONCRETE FOUNDATION; SEE STRUCTURAL
- 6" CONC. FILLED STL. BOLLARD, PRIMED W/ PLASTIC COVER
- INDICATES LINE OF ROOF BEYOND
- GROUND MOUNTED SIGNAGE; COORDINATE POWER REQUIREMENTS w/ APPROVED SIGNAGE DRAWINGS
- BLACK ANODIZED COILING OVERHEAD DOOR WITH INSULATED GLAZING



2 WEST ELEVATION
1/8" = 1'-0"



1 SOUTH ELEVATION
1/8" = 1'-0"

DO NOT SCALE DRAWINGS

ISSUED

01.11.23 SITE PLAN RESUBMITTAL

DRAWN BCG

CHECKED SHF

SEAL

**NOT FOR
CONSTRUCTION**

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CLIENT

LITHIA MOTORS
ANNE BRECK
150 N BARTLETT ST
MEDFORD, OR 97504

PROJECT 2041

**SUBURBAN
PORSCHE OF NOVI**
24315 HAGGERTY RD
NOVI, MI 48375

EXTERIOR ELEVATIONS

A2.2