



# COMMUNITY DEVELOPMENT DEPARTMENT

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

## ZONING BOARD OF APPEALS STAFF REPORT

**FOR:** City of Novi Zoning Board of Appeals

**ZONING BOARD APPEALS DATE:** June 14, 2022

**REGARDING:** 24295 Haggerty Road, Parcel # 50-22-24-476-030 (PZ22-0024)

**BY:** Larry Butler, Deputy 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:	Northwest corner of 10 Mile and Haggerty Road
Parcel #:	50-22-24-476-030

**Request**

The applicant is requesting a variance from the City of Novi Zoning Ordinance Section 3.10.3.A to allow 2 overhead doors to face a major thoroughfare (Ten Mile 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. **PZ22-0024**, 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. **PZ22-0024**, 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) 347-0417.

Larry Butler  
Deputy Director Community Development, City of Novi



Community Development Department

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

RECEIVED

MAY 05 2022

ZONING BOARD OF APPEALS APPLICATION

CITY OF NOVI COMMUNITY DEVELOPMENT

APPLICATION MUST BE FILLED OUT COMPLETELY

I. PROPERTY INFORMATION (Address of subject ZBA Case)
PROJECT NAME / SUBDIVISION
Lithia Motors, Inc. Audi of Novi
ADDRESS
24295 Haggerty Road
LOT/SIUTE/SPACE #
SIDWELL #
50-22-24 - 476 - 030
May be obtained from the Assessing Department (248) 347-0485

Application Fee: 600-
Meeting Date: June 14, 2022
ZBA Case #: PZ22-0024

CROSS ROADS OF PROPERTY
NE corner of the intersection of 10 Mile Road and Haggerty Road
IS THE PROPERTY WITHIN A HOMEOWNER'S ASSOCIATION JURISDICTION?
[ ] YES [x] NO
REQUEST IS FOR:
[ ] RESIDENTIAL [x] COMMERCIAL [ ] VACANT PROPERTY [ ] SIGNAGE
DOES YOUR APPEAL RESULT FROM A NOTICE OF VIOLATION OR CITATION ISSUED?
[ ] YES [x] NO

II. APPLICANT INFORMATION
A. APPLICANT
EMAIL ADDRESS: 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 [ ] 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: Lithia Real Estate Ince
TELEPHONE NO.: 541-734-3040
ORGANIZATION/COMPANY: Lithia Motors, Inc.
FAX NO.
ADDRESS: 150 N. Bartlett Street
CITY: Medford
STATE: OR
ZIP CODE: 97501

III. ZONING INFORMATION
A. ZONING DISTRICT
[ ] R-A [ ] R-1 [ ] R-2 [ ] R-3 [ ] R-4 [ ] RM-1 [ ] RM-2 [ ] MH
[ ] I-1 [ ] I-2 [ ] RC [ ] TC [ ] TC-1 [x] OTHER B-3
B. VARIANCE REQUESTED
INDICATE ORDINANCE SECTION (S) AND VARIANCE REQUESTED:
1. Section 3.10.3.A Variance requested Variance Requested to allow overhead doors facing 10 Mile Road
2. Section 3.1.12.D Variance requested Variance requested to allow the north parking setback to be reduced to 4 feet.
3. Section 28-5 Permanent signs Variance requested Variance requested to allow a total 76.85 SF of signs facing 10 Mile Road. Ordinance allows for 71.25 SF
4. Section Variance requested

IV. FEES AND DRAWINGS
A. FEES
[ ] Single Family Residential (Existing) \$200 [ ] (With Violation) \$250 [ ] Single Family Residential (New) \$250
[x] Multiple/Commercial/Industrial \$300 [ ] (With Violation) \$400 [x] Signs \$300 [ ] (With Violation) \$400
[ ] House Moves \$300 [ ] Special Meetings (At discretion of Board) \$600
B. DRAWINGS 1-COPY & 1 DIGITAL COPY SUBMITTED AS A PDF
• Dimensioned Drawings and Plans
• Site/Plot Plan
• Existing or proposed buildings or addition on the property
• Number & location of all on-site parking, if applicable
• Existing & proposed distance to adjacent property lines
• Location of existing & proposed signs, if applicable
• Floor plans & elevations
• Any other information relevant to the Variance application



# ZONING BOARD OF APPEALS APPLICATION

## V. VARIANCE

### A. VARIANCE (S) REQUESTED

DIMENSIONAL     USE     SIGN

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

### B. SIGN CASES (ONLY)

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

### C. ORDINANCE

#### City of Novi Ordinance, Section 3107 - Miscellaneous

No order of the Board 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 Board 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

5/2/22  
Date

### B. PROPERTY OWNER

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

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

  
Property Owner Signature

5/2/22  
Date

## VII. FOR OFFICIAL USE ONLY

### DECISION ON APPEAL:

GRANTED     DENIED

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

\_\_\_\_\_  
Chairperson, Zoning Board of Appeals

\_\_\_\_\_  
Date



## Community Development Department

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

## REVIEW STANDARDS DIMENSIONAL VARIANCE

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

### Standard #1. Circumstances or Physical Conditions.

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

- a. **Shape of Lot.** Exceptional narrowness, shallowness or shape of a specific property in existence on the effective date of the Zoning Ordinance or amendment.

**Describe below:**

The dealership is subject to a Corporate Branding Requirement. The arrangement of the showroom with adjacency to the service department, and the requirement for drive through service, are mandated by Audi. Due to these requirements and the corner lot condition, any re-orientation of the building would still not comply with the requirement in Section 3.10.3.A.

OR

- b. **Environmental Conditions.** Exceptional topographic or environmental conditions or other extraordinary situations on the land, building or structure. **Describe below:**

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. **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).

The dealership is subject to a Corporate Branding Requirement where the orientation and adjacency of the service drive in relation to the showroom are mandated by the agreement.

## **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.

The dealership is subject to a Corporate Branding Requirement. The arrangement of the showroom with adjacency to the service department, and the requirement for drive through service, are mandated by Audi. Due to these requirements and the corner lot condition, any re-orientation of the building would still not comply with the requirement in Section 3.10.3.A.

## **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.

Due to the brand requirements and the corner lot condition, any re-orientation of the building would still not comply with the requirement in Section 3.10.3.A. To have a clearly identifiable service drive location available for customers that visit the site, we are requesting a variation to allow overhead doors to face 10 Mile Road.

## **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.

This site is located at the intersection of 10 Mile Road and Haggerty Road, directly adjacent to other business sites in all directions. When considering the existing building conditions, proposed building, as well as proposed landscape conditions, the granting of this variance will in no way negatively impact surrounding properties.

**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  
2111 WOODWARD AVEUNE  
SUITE 1001  
DETROIT, MICHIGAN 48201  
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 24, T.1N., R.8E.,  
NOVI,  
OAKLAND COUNTY, MICHIGAN



LOCATION MAP  
N.T.S.

**SHEET INDEX**

- C0 Cover Sheet
- C1 Boundary Topographic, and Tree Survey
- C2 Preliminary Site Plan
- C3 Storm Water Management Plan
- C4 Storm Water Management Calculations
- C5 Soil Erosion and Sedimentation Control Plan
- C6 Truck Maneuvering Plan
- C7 Notes and Details
- C8 Notes and Details

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

- SP1.1 Site Plan
- SP1.2 Site Plan Details
- TS1.4 Composite Plan
- A2.1 Building Elevations

1 of 1 Photometric Plan

- 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 DESCRIBED AS:

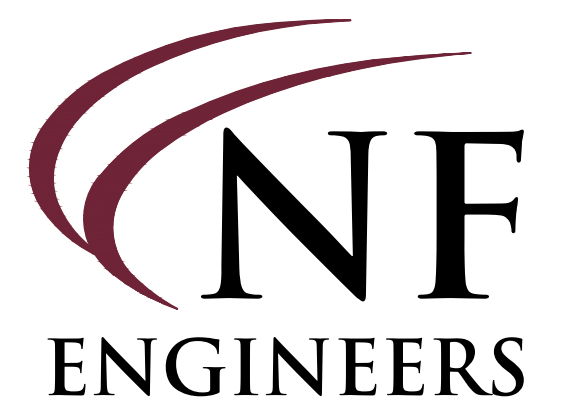
A PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 24: THENCE S.88°40'57"W., (RECORDED AS S.88°26'40"W.) 60.02 FEET TO A POINT ON THE WESTERLY LINE OF HAGGERTY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

CONTAINING 3.93 ACRES  
APN: 22-24-476-030

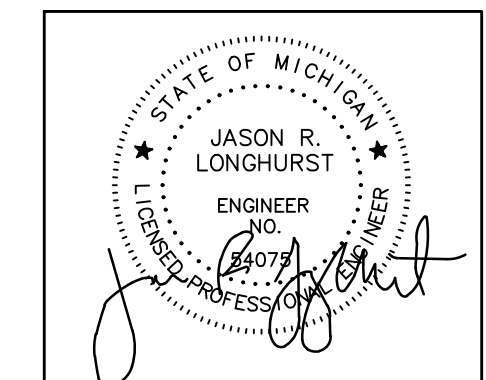
<b>REVISIONS:</b>
2022-03-09 ISSUED FOR SITE PLAN REVIEW

Project Name

# Lithia Motors, Inc. Audi of Novi



N & F JOB #1921-03



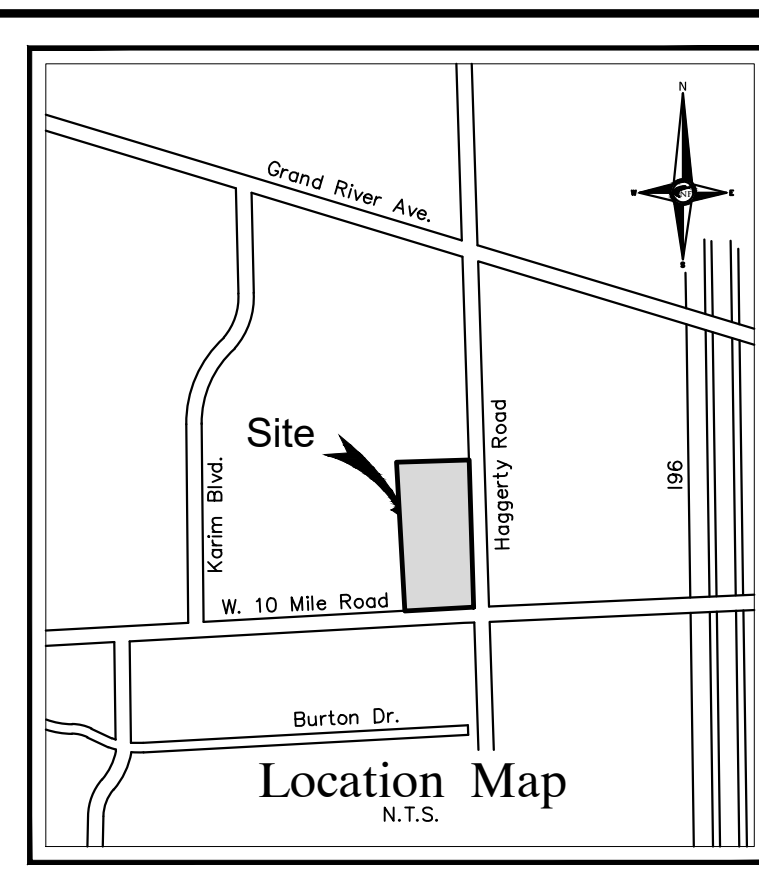
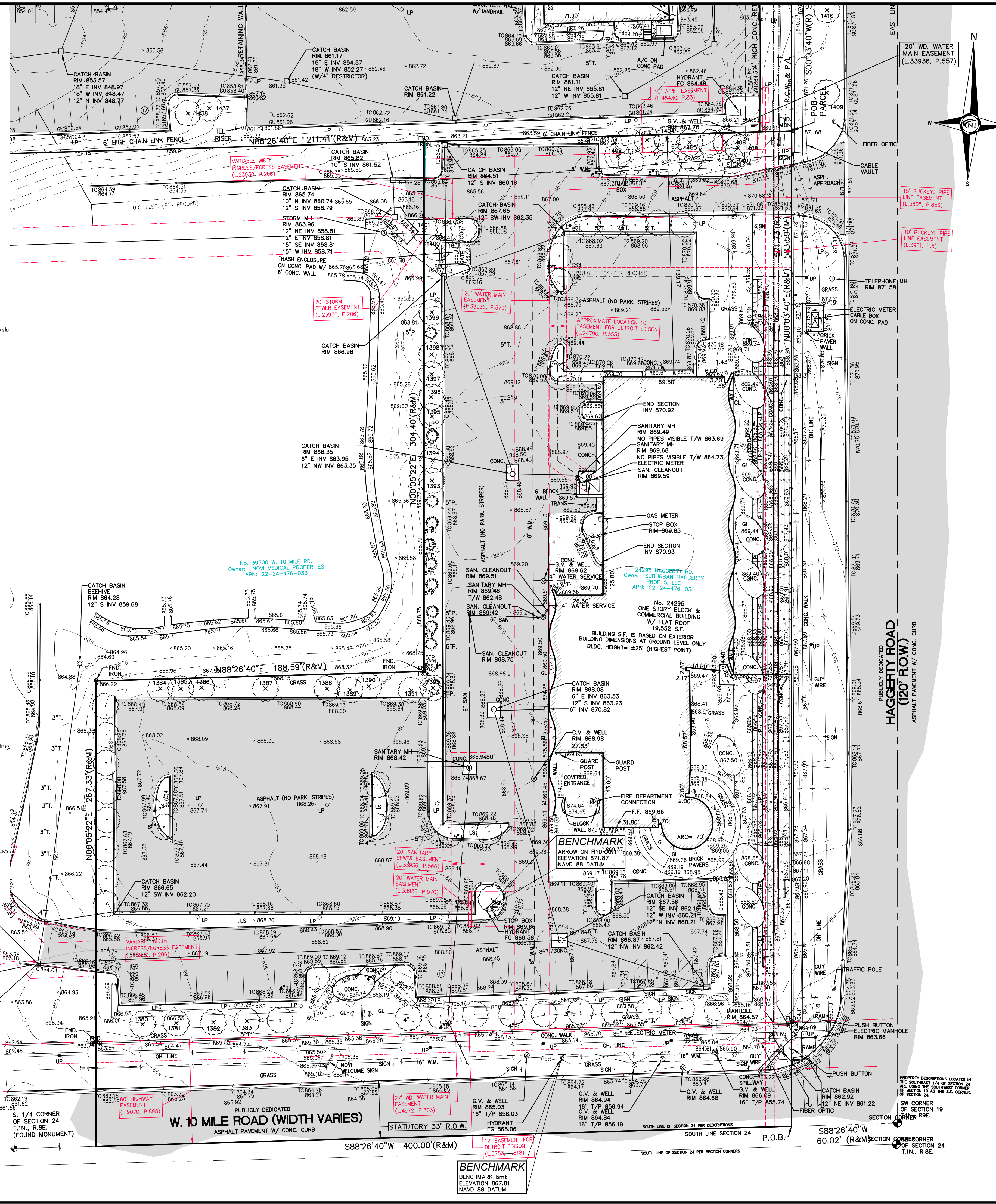
CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

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

Job Number: R21-01  
 Job Location: Novi, MI  
 Date: 3/27/2019  
 Performed By: Jacob R. Hamilton Forestry Reg. No. 3361046119

**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 infested  
 "Non-recorded defects may include decayed wood, cracks, root problems, weak branch unions, cankers, poor tree architecture, dead/faded branches due to various causes."

Tree #	Botanical Name	Common Name	Dia.	Type	Other Dia.	Condition	Comments
1380	Ginkgo biloba	Ginkgo	8			Good	
1381	Ginkgo biloba	Ginkgo	8			Good	
1382	Ginkgo biloba	Ginkgo	8			Good	
1383	Ginkgo biloba	Ginkgo	8			Good	
1384	Picea pungens	Colorado Blue Spruce	8			Good	
1385	Picea pungens	Colorado Blue Spruce	8	Twin 2		Fair	Dieback
1386	Picea pungens	Colorado Blue Spruce	8			Good	
1387	Picea pungens	Colorado Blue Spruce	8			Fair	Dieback
1388	Picea pungens	Colorado Blue Spruce	8			Fair	Dieback
1389	Picea pungens	Colorado Blue Spruce	8			Fair	Dieback
1390	Picea pungens	Colorado Blue Spruce	8			Fair	Dieback
1391	Picea pungens	Colorado Blue Spruce	9			Fair	Dieback
1392	Picea pungens	Colorado Blue Spruce	9			Fair	Dieback
1393	Picea pungens	Colorado Blue Spruce	8			Good	
1394	Picea pungens	Colorado Blue Spruce	8			Good	
1395	Picea pungens	Colorado Blue Spruce	8			Good	
1396	Picea pungens	Colorado Blue Spruce	8			Good	
1397	Picea pungens	Colorado Blue Spruce	8			Good	
1398	Picea pungens	Colorado Blue Spruce	8			Good	
1399	Picea pungens	Colorado Blue Spruce	10			Good	
1400	Picea pungens	Colorado Blue Spruce	10			Good	
1401	Picea pungens	Colorado Blue Spruce	9			Good	
1402	Prunus caryocarpa	Bradford Pear	9			Good	
1403	Prunus caryocarpa	Bradford Pear	8			Fair	Mechanical damage on roots, roots exposed from steep slope
1404	Prunus caryocarpa	Bradford Pear	9			Good	
1405	Prunus caryocarpa	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	Dieback, competition, grinding roots
1409	Ginkgo biloba	Ginkgo	9			Good	
1410	Ginkgo biloba	Ginkgo	12			Good	
1411	Ginkgo biloba	Ginkgo	10			Fair	Leaning, mechanical damage
1412	Ginkgo biloba	Ginkgo	13			Good	
1413	Ginkgo biloba	Ginkgo	8			Good	
1414	Ginkgo biloba	Ginkgo	9			Good	
1415	Ginkgo biloba	Ginkgo	12			Good	
1416	Ginkgo biloba	Ginkgo	10			Good	
1417	Quercus macrocarpa	Bur Oak	8			Good	
1418	Quercus macrocarpa	Bur Oak	8			Good	
1419	Quercus macrocarpa	Bur Oak	9			Good	
1420	Prunus caryocarpa	Bradford Pear	13	Twin 9		Poor	Cankers, lost limbs, insect, dieback
1421	Prunus caryocarpa	Bradford Pear	8	Multiple 8,5		Poor	Rot, insect, lost limbs, epicormic branching
1422	Quercus macrocarpa	Bur Oak	8			Good	
1423	Quercus macrocarpa	Bur Oak	8			Good	
1424	Prunus caryocarpa	Bradford Pear	5	Multiple 5,4,3		Good	
1425	Prunus caryocarpa	Bradford Pear	5	Multiple 5,4,3,3		Good	
1426	Prunus caryocarpa	Bradford Pear	6	Multiple 5,3,3,3		Good	
1427	Quercus macrocarpa	Bur Oak	10			Fair	Mechanical damage on roots
1428	Prunus caryocarpa	Bradford Pear	5	Multiple 5,4,4,3,3		Good	
1429	Prunus caryocarpa	Bradford Pear	5	Multiple 5,4,3,3,3		Good	
1430	Prunus caryocarpa	Bradford Pear	5	Multiple 5,5,3		Good	
1431	Quercus macrocarpa	Bur Oak	8			Good	
1432	Gleditsia tricanthos	Honeylocust	8			Good	
1433	Gleditsia tricanthos	Honeylocust	9			Good	
1434	Gleditsia tricanthos	Honeylocust	9			Good	
1435	Gleditsia tricanthos	Honeylocust	11			Good	
1436	Prunus caryocarpa	Bradford Pear	6	Multiple 5,5,4,4,4		Good	
1437	Tilia cordata	Little-leaf Linden	12			Good	
1438	Gleditsia tricanthos	Honeylocust	10			Good	
1439	Gleditsia tricanthos	Honeylocust	10			Good	
1440	Gleditsia tricanthos	Honeylocust	10			Good	
1441	Gleditsia tricanthos	Honeylocust	8			Good	
1442	Gleditsia tricanthos	Honeylocust	8			Good	
1443	Gleditsia tricanthos	Honeylocust	9			Good	
1444	Gleditsia tricanthos	Honeylocust	8			Good	
1445	Prunus caryocarpa	Bradford Pear	8			Good	
1446	Acer platanoides	Norway Spruce	10			Good	
1447	Tilia cordata	Little-leaf Linden	12			Fair	Grinding roots, canker
1448	Tilia cordata	Little-leaf Linden	12			Good	
1449	Acer negundo	Bovender	10			Poor	Leaning, epicormic branching
1450	Acer negundo	Bovender	10	Twin 7		Poor	Leaning, dieback
1451	Populus deltoides	Eastern Cottonwood	19			Good	
1452	Acer negundo	Bovender	10	Twin 4		Fair	Leaning
1453	Populus deltoides	Eastern Cottonwood	20			Good	
1454	Acer negundo	Bovender	8			Poor	Leaning, epicormic branching, dieback, competition
1455	Acer negundo	Bovender	11			Poor	Leaning, dieback, insect, lost twigs, rot, epicormic branching
1456	Acer negundo	Bovender	14	Twin 3		Poor	Leaning, epicormic branching
1457	Acer negundo	Bovender	10			Fair	Vines, dieback
1458	Acer negundo	Bovender	14			Fair	Leaning, dieback, vines
1459	Acer negundo	Bovender	9			Fair	Leaning, dieback, insect, vines
1460	Acer negundo	Bovender	8			Poor	Leaning, dieback, epicormic branching
1461	Acer negundo	Bovender	10			Poor	Leaning, dieback
1462	Acer negundo	Bovender	8			Fair	Leaning, competition, epicormic branching
1463	Acer negundo	Bovender	8			Fair	Leaning, dieback
1464	Acer negundo	Bovender	8			Fair	Dieback, insect
1465	Acer negundo	Bovender	8			Poor	Complete dieback, some epicormic branching
1466	Acer negundo	Bovender	9			Fair	Leaning, minor dieback
1467	Acer negundo	Bovender	13			Fair	Leaning, dieback, dieback
1468	Acer negundo	Bovender	14	Multiple 5,4		Poor	Leaning, dieback, cankers, insect, epicormic branching, vines
1469	Populus deltoides	Eastern Cottonwood	28			Good	
1470	Tilia cordata	Little-leaf Linden	13			Good	
1471	Acer negundo	Bovender	10			Poor	Vines, leaning, dieback
1472	Prunus caryocarpa	Bradford Pear	8	Multiple 5,5,4,4,4		Good	
1473	Prunus caryocarpa	Bradford Pear	4	Multiple 4,4,4,4,3		Good	
1474	Prunus caryocarpa	Bradford Pear	7	Multiple 5,4,4,4		Good	



**NF ENGINEERS**  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
 4677 WOODWARD AVE.  
 PONTIAC, MI 48342-5032  
 TEL. (248) 332-7931  
 FAX. (248) 332-8257  
 WWW.NOWAKFRAUS.COM

SEAL

STATE OF MICHIGAN  
 JEFFREY J. HUHTA  
 PROFESSIONAL SURVEYOR  
 NO. 9858  
 EXPIRES 12/31/2020

PROJECT  
 Lithia Motors, Inc.  
 - Audi of Novi

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

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

PROJECT LOCATION  
 Part of the Southeast 1/4 of Section 24, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan

**WETLANDS NOTE**  
 NO WETLANDS ON SITE.

**FLOODPLAIN NOTE**  
 PROPERTY IS OUTSIDE OF THE FLOODPLAIN.

**WOODLANDS NOTE**  
 NO WOODLANDS ON SITE.

**LEGAL DESCRIPTION**  
 LAND SITUATED IN THE STATE OF MICHIGAN, COUNTY OF OAKLAND CITY OF NOVI DESCRIBED AS:  
 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 S.88°45'17"W, (RECORDED AS S.88°26'40"W) 60.02 FEET TO A POINT ON THE WESTERLY LINE OF HAGGERTY ROAD; THENCE N.0°03'40"E, 583.59 FEET (RECORDED AS 571.73 FEET) ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING; THENCE S.88°26'40"W, 800.00 FEET; THENCE N.0°03'40"E, 190.00 FEET; THENCE N.49°33'07"E, 150.25 FEET; THENCE S.89°52'20"E, 685.42 FEET TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE S.0°03'40"W, 285.00 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING.

CONTAINING 3.93 ACRES  
 APN: 22-24-476-030

**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 RECORDS 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.

**TOPOGRAPHIC SURVEY NOTES**  
 ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

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

**LEGEND**

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

DRAWN BY:  
 T. Wood

DESIGNED BY:

APPROVED BY:  
 J. Huhta

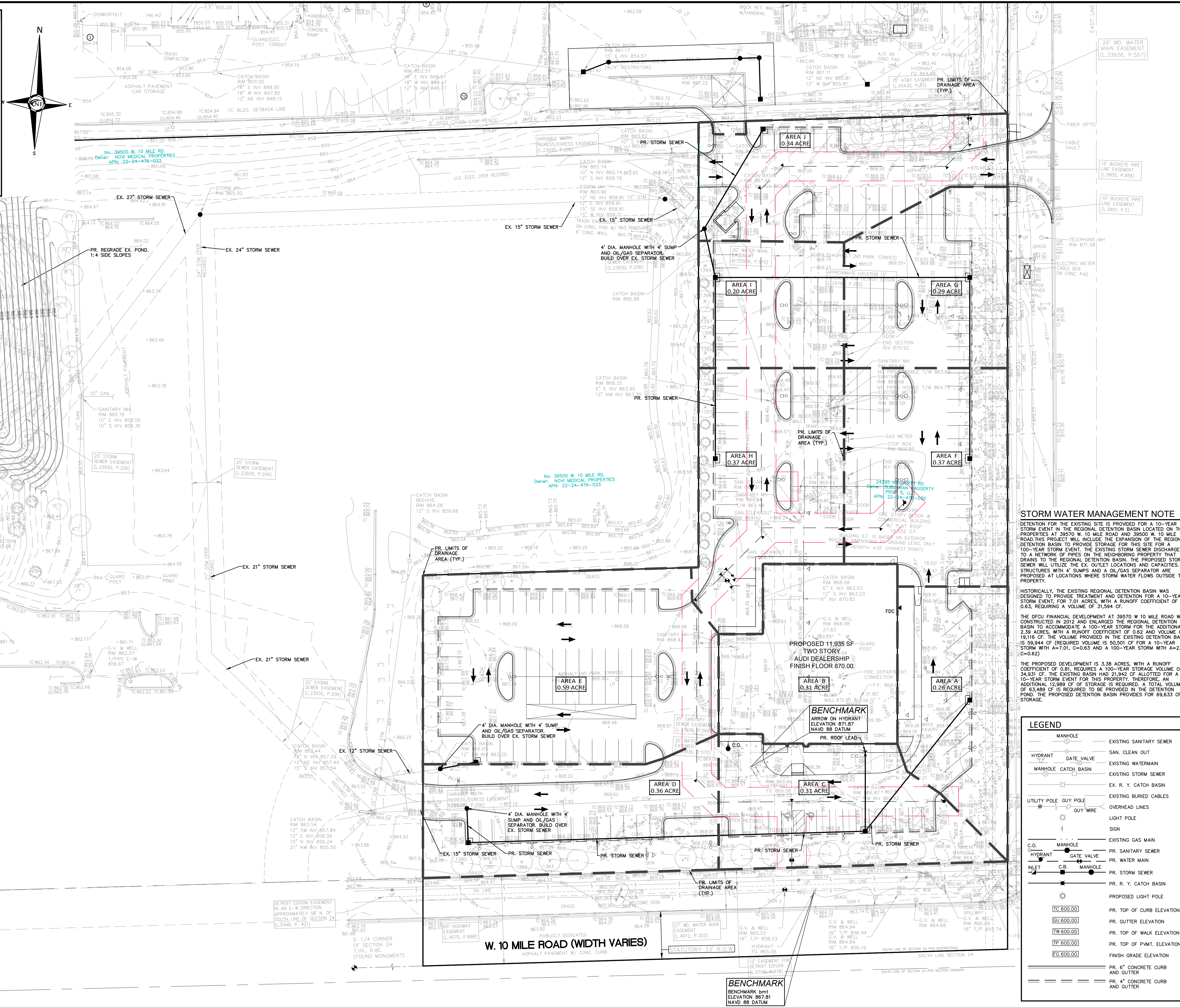
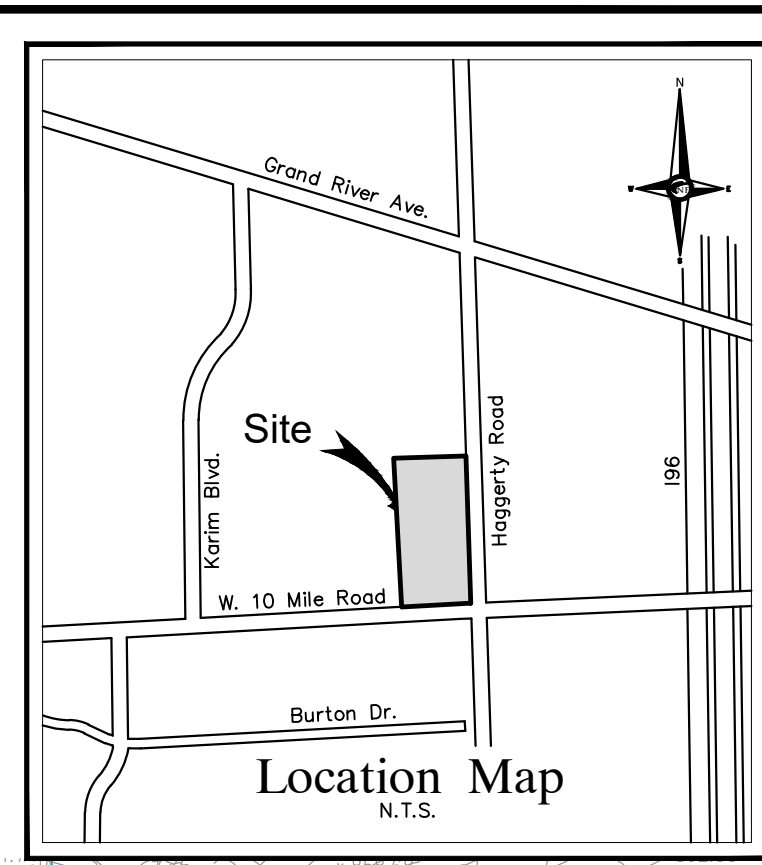
DATE:  
 August 6, 2019

SCALE: 1" = 30'

NFE JOB NO. SHEET NO.  
 1921-03 C1







**STORM WATER MANAGEMENT NOTE**

DETENTION FOR THE EXISTING SITE IS PROVIDED FOR A 10-YEAR STORM EVENT IN THE REGIONAL DETENTION BASIN LOCATED ON THE PROPERTIES AT 39500 W. 10 MILE ROAD AND 39500 W. 10 MILE ROAD. THIS PROJECT WILL INCLUDE THE EXPANSION OF THE REGIONAL DETENTION BASIN TO PROVIDE STORAGE FOR THIS SITE FOR A 10-YEAR STORM EVENT. THE EXISTING STORM SEWER DISCHARGES TO A NETWORK OF PIPES ON THE NEIGHBORING PROPERTY THAT DRAINS TO THE REGIONAL DETENTION BASIN. THE PROPOSED STORM SEWER WILL UTILIZE THE EX. OUTLET LOCATIONS AND CAPACITIES. STRUCTURES WITH 4" SUMPS AND A OIL/GAS SEPARATOR ARE PROPOSED AT LOCATIONS WHERE STORM WATER FLOWS OUTSIDE THE PROPERTY.

HISTORICALLY, THE EXISTING REGIONAL DETENTION BASIN WAS DESIGNED TO PROVIDE TREATMENT AND DETENTION FOR A 10-YEAR STORM EVENT, FOR 7.01 ACRES, WITH A RUNOFF COEFFICIENT OF 0.63, REQUIRING A VOLUME OF 31,594 CF.

THE DFCU FINANCIAL DEVELOPMENT AT 39570 W 10 MILE ROAD WAS CONSTRUCTED IN 2012 AND ENLARGED THE REGIONAL DETENTION BASIN TO ACCOMMODATE A 100-YEAR STORM FOR THE ADDITIONAL 2.39 ACRES, WITH A RUNOFF COEFFICIENT OF 0.62 AND VOLUME OF 19,119 CF. THE VOLUME PROVIDED IN THE EXISTING DETENTION BASIN IS 58,444 CF (REQUIRED VOLUME IS 50,501 CF FOR A 10-YEAR STORM WITH A=7.01, C=0.63 AND A 100-YEAR STORM WITH A=2.39, C=0.62).

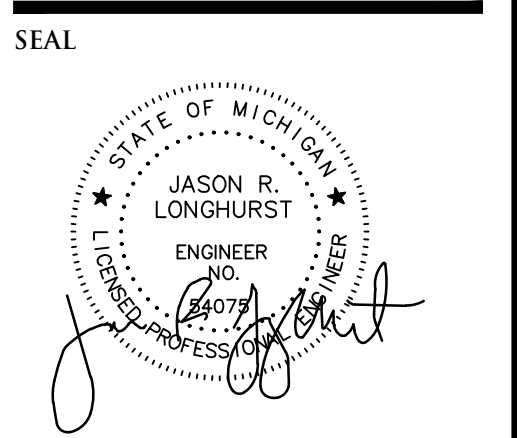
THE PROPOSED DEVELOPMENT IS 3.38 ACRES, WITH A RUNOFF COEFFICIENT OF 0.81, REQUIRES A 100-YEAR STORAGE VOLUME OF 34,831 CF. THE EXISTING BASIN HAD 21,942 CF ALLOTTED FOR A 10-YEAR STORM EVENT FOR THIS PROPERTY. THEREFORE, AN ADDITIONAL 12,889 CF OF STORAGE IS REQUIRED. A TOTAL VOLUME OF 63,489 CF IS REQUIRED TO BE PROVIDED IN THE DETENTION POND. THE PROPOSED DETENTION BASIN PROVIDES FOR 69,633 CF OF STORAGE.

**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
	C.O.	OVERHEAD LINES
	HYDRANT	LIGHT POLE
	INLET	SIGN
	MANHOLE	EXISTING GAS MAIN
	GATE VALVE	PR. SANITARY SEWER
	MANHOLE	PR. WATER MAIN
	MANHOLE	PR. STORM SEWER
	MANHOLE	PR. R. Y. CATCH BASIN
	PROPOSED LIGHT POLE	PR. 6" CONCRETE CURB AND GUTTER
	TC 600.00	PR. TOP OF CURB ELEVATION
	GW 600.00	PR. GUTTER ELEVATION
	TW 600.00	PR. TOP OF WALK ELEVATION
	TP 600.00	PR. TOP OF PWMT. ELEVATION
	FG 600.00	FINISH GRADE ELEVATION
	PR. 6" CONCRETE CURB AND GUTTER	
	PR. 4" CONCRETE CURB AND GUTTER	



**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.  
- Audi of Novi

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

**Contact:**  
Anne Breck  
Tel: 541-734-3043  
email: abreck@lithia.com

**PROJECT LOCATION**  
Part of the Southeast 1/4 of Section 24, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan

**SHEET**  
Storm Water Management Plan



**DATE ISSUED/REVISED**  
2022-03-09 ISSUED FOR SITE PLAN REVIEW

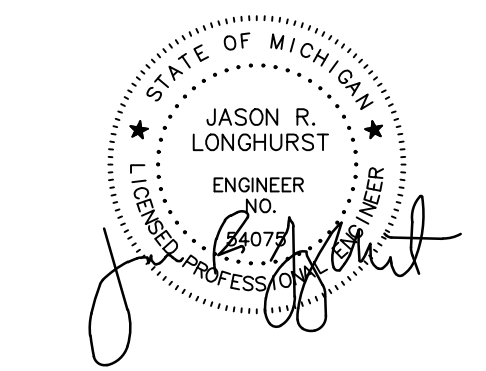
**DRAWN BY:**  
T. Wood  
**DESIGNED BY:**  
T. Wood  
**APPROVED BY:**  
J. Longhurst

**DATE:**  
March 9, 2022

**SCALE:** 1" = 30'

**NFE JOB NO. SHEET NO.**  
1921-03 C3

SEAL



PROJECT  
Lithia Motors, Inc.  
- Audi of Novi

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

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

PROJECT LOCATION  
Part of the Southeast 1/4 of  
Section 24, Town 1 North,  
Range 8 East, City of Novi,  
Oakland County, Michigan


SHEET  
Storm Water Management  
Calculations



DATE ISSUED/REVISED  
2022-03-09 ISSUED FOR SITE PLAN REVIEW

DRAWN BY:  
T. Wood  
DESIGNED BY:  
T. Wood  
APPROVED BY:  
J. Longhurst  
DATE:  
March 9, 2022

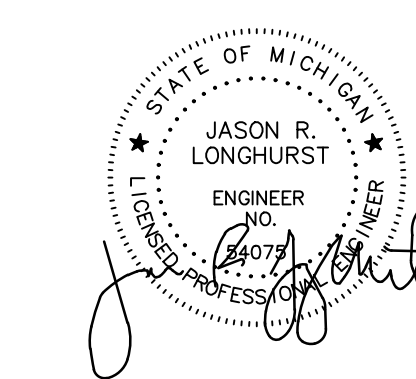
SCALE: 1" = 30'



NFE JOB NO. SHEET NO.  
**1921-03 C4**

Novi Storm Water Detention Calculations - 100 Year Storm			
Proposed Volume Required for Audi of Novi Redevelopment			
Determine Site Runoff Coefficient:			
Proposed Land Use:	Runoff Coefficient:	Drainage Area:	
Pavement	0.95	2.185	Acres
Building	0.95	0.274	Acres
Landscape / Open Space:	0.35	0.921	Acres
Detention Basin	1.00	0.000	Acres
<b>Total Acreage:</b>		<b>3.379</b>	<b>Acres</b>
<b>Weighted Runoff Coefficient "C" Factor =</b>		<b>0.787</b>	
Detention Calculation - City of Novi Method			
(100 Year Storm Event - With Outlet (Orifice))			
Contributing Acreage:		3.379	Acres
Allowable Outflow, Q <sub>a</sub> :		0.150	CFS / Acre
Q <sub>a</sub> =0.15*A		0.51	CFS
Runoff Coefficient, C:		0.787	Imperviousness
Maximum Allowable Outflow, Q <sub>0</sub> =Q <sub>a</sub> /(AxC)		0.191	CFS / (Acre * Impers)
T Storage Time (100 Year): T100=-25+sqrt(10312.5/Q0)		207.541	Minutes
Vs Storage Volume (100 Year): Vs=16500xT/(T100+25)+0xQ0xT100		13,142.94	CF / (Acre * Impers)
Vt Total Volume (100 Year): Vt=V100xAxC		34,930.66	Cubic Feet
Volume Required:		34,930.66	Cubic Feet
Existing Volume Required for Audi of Novi Redevelopment - 10 Year			
Determine Site Runoff Coefficient:			
Proposed Land Use:	Runoff Coefficient:	Drainage Area:	
Impervious	0.95	2.651	Acres
Landscape / Open Space:	0.35	0.728	Acres
Detention Basin	1.00	0.000	Acres
<b>Total Acreage:</b>		<b>3.379</b>	<b>Acres</b>
<b>Weighted Runoff Coefficient "C" Factor =</b>		<b>0.821</b>	
Detention Calculation - City of Novi Method			
(10 Year Storm Event - With Outlet (Orifice))			
Contributing Acreage:		3.379	Acres
Allowable Outflow, Q <sub>a</sub> :		0.150	CFS / Acre
Q <sub>a</sub> =0.15*A		0.51	CFS
Runoff Coefficient, C:		0.821	Imperviousness
Maximum Allowable Outflow, Q <sub>0</sub> =Q <sub>a</sub> /(AxC)		0.183	CFS / (Acre * Impers)
T Storage Time (10 Year): T10=-25+sqrt(6562.5/Q0)		164.491	Minutes
Vs Storage Volume (10 Year): Vs=10500xT/(T10+25)+0xQ0xT10		7,912.19	CF / (Acre * Impers)
Vt Total Volume (10 Year): Vt=V10xAxC		21,942.48	Cubic Feet
<b>Total Volume Required</b>		<b>34,930.66</b>	<b>Cubic Feet</b>
Proposed Audi - 100 Year Storage Volume Required=		34,930.66	Cubic Feet
Existing Audi - 10 Year Storage Volume Required=		21,942.48	Cubic Feet
Proposed 100 Year - Existing 10 Year		12,988.18	Cubic Feet
Existing Regional Pond Volume Required Per LSG Plans 716.0001S Dated 2010-12-07		50,501.00	Cubic Feet
<b>Total Volume Required =</b>		<b>63,489.18</b>	<b>Cubic Feet</b>
<b>Total Volume Provided =</b>		<b>69,633.54</b>	<b>Cubic Feet</b>
Detention Basin Volume			
Elevation	Surface Area	Incremental Volume	Cumulative Volume
852.89	0		
853.00	37	2	2
854.00	3,916	1,977	1,979
855.00	5,050	4,483	6,462
856.00	6,366	5,708	12,170
857.00	7,827	7,097	19,266
858.00	9,398	8,613	27,879
859.00	11,076	10,237	38,116
860.00	12,900	11,988	50,104
Volume Provided in Sediment Forebay Per LSG Plans 716.0001S Dated 2010-12-07		19,530	Cubic Feet
<b>Total Detention Basin Volume Provided:</b>		<b>50,103.54</b>	<b>Cubic Feet</b>
<b>Total Volume Provided:</b>		<b>69,633.54</b>	
Determine Total Site Runoff Coefficient:			
Proposed Land Use:	Runoff Coefficient:	Drainage Area:	
Impervious	0.95	5.362	Acres
Landscape / Open Space:	0.35	3.860	Acres
Detention Basin	1.00	0.177	Acres
<b>Total Acreage:</b>		<b>9.399</b>	<b>Acres</b>
<b>Weighted Runoff Coefficient "C" Factor =</b>		<b>0.705</b>	
<b>Formula: First flush Volume, Vt,ff = 1.815 x A x C</b>			
Contributing Acreage:		9.399	Acres
Runoff Coefficient, C:		0.705	Imperviousness
Volume Vt,ff Required: Vt,ff=1.815xAxC		12,019	Cubic Feet

SEAL



PROJECT

Lithia Motors, Inc.  
- Audi of Novi

CLIENT

Lithia Motors, Inc.  
150 N. Bartlett Street  
Medford, Oregon 97501

Contact:

Anne Breck  
Tel: 541-734-3043  
email: abreck@lithia.com

PROJECT LOCATION

Part of the Southeast 1/4 of  
Section 24, Town 1 North,  
Range 8 East, City of Novi,  
Oakland County, Michigan

SHEET

Soil Erosion and  
Sedimentation Control  
Plan



Know what's below  
Call before you dig.

DATE ISSUED/REVISED

2022-03-09 ISSUED FOR SITE PLAN REVIEW

DRAWN BY:

T. Wood

DESIGNED BY:

T. Wood

APPROVED BY:

J. Longhurst

DATE:

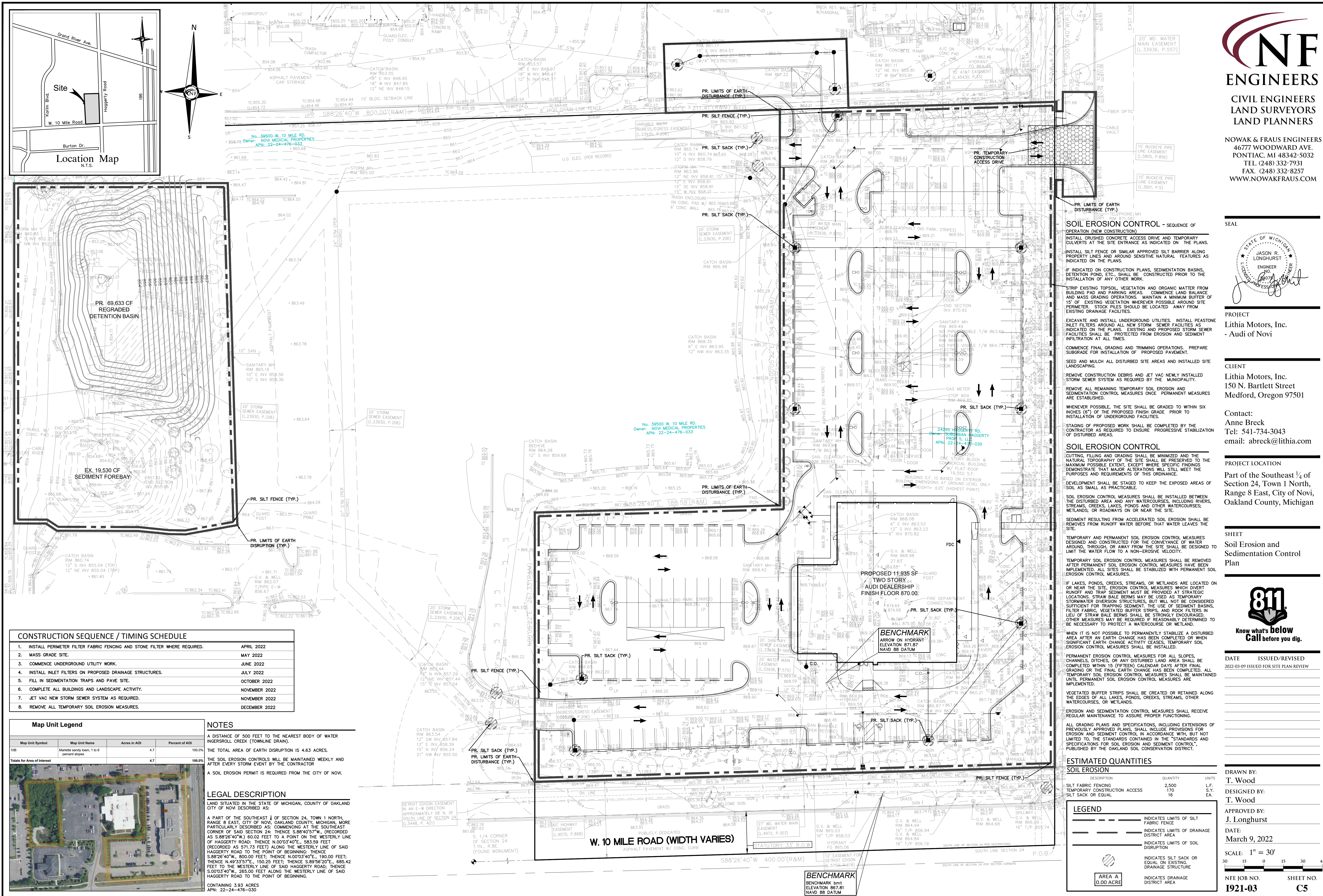
March 9, 2022

SCALE: 1" = 30'

30 15 0 15 30 45

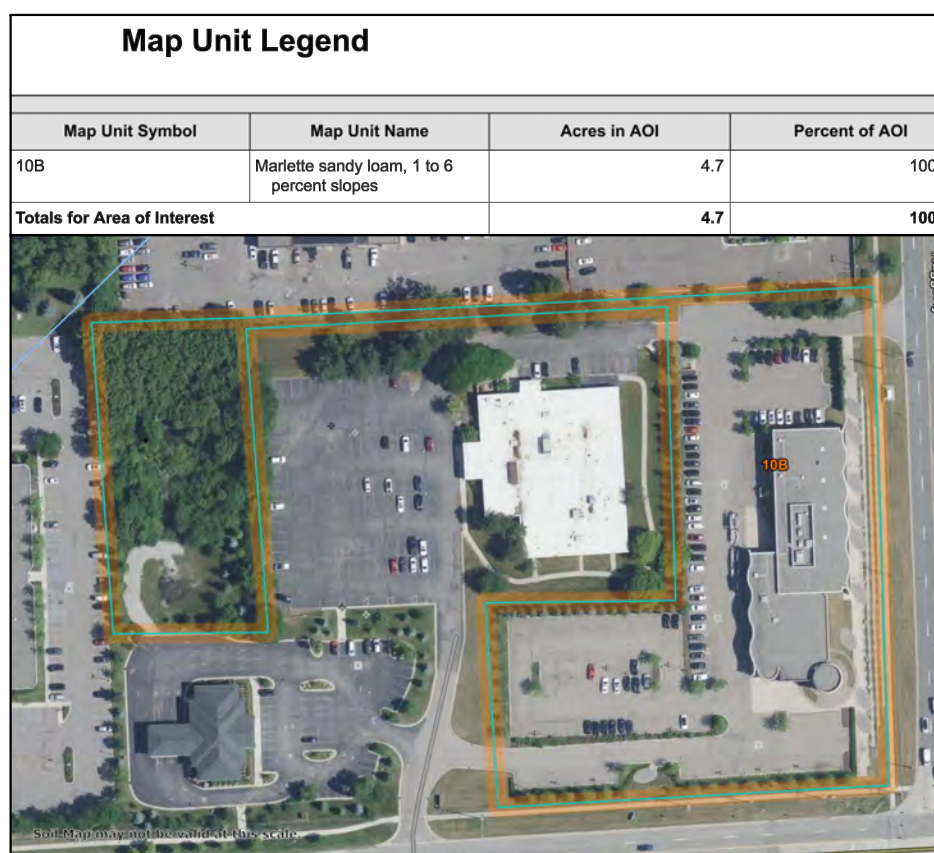
NFE JOB NO. SHEET NO.

1921-03 C5



**CONSTRUCTION SEQUENCE / TIMING SCHEDULE**

1. INSTALL PERIMETER FILTER FABRIC FENCING AND STONE FILTER WHERE REQUIRED.	APRIL 2022
2. MASS GRADE SITE.	MAY 2022
3. COMMENCE UNDERGROUND UTILITY WORK.	JUNE 2022
4. INSTALL INLET FILTERS ON PROPOSED DRAINAGE STRUCTURES.	JULY 2022
5. FILL IN SEDIMENTATION TRAPS AND PAVE SITE.	OCTOBER 2022
6. COMPLETE ALL BUILDINGS AND LANDSCAPE ACTIVITY.	NOVEMBER 2022
7. JET VAC NEW STORM SEWER SYSTEM AS REQUIRED.	NOVEMBER 2022
8. REMOVE ALL TEMPORARY SOIL EROSION MEASURES.	DECEMBER 2022



**NOTES**

A DISTANCE OF 500 FEET TO THE NEAREST BODY OF WATER INGRESS/ROLL CREEK (TOWNLINER DRAIN).

THE TOTAL AREA OF EARTH DISRUPTION IS 4.63 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.

**LEGAL DESCRIPTION**

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

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 SOUTHWEST CORNER OF SAID SECTION 24; THENCE S.89°45'57"W, (RECORDED AS S.88°26'40"W) 60.02 FEET TO A POINT ON THE WESTERLY LINE OF HAGGERTY ROAD; THENCE N.00°03'40"E, 583.59 FEET (RECORDED AS 571.73 FEET) ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING; THENCE S.88°26'40"W, 800.00 FEET; THENCE N.00°03'40"E, 190.00 FEET; THENCE N.49°13'57"E, 150.25 FEET; THENCE S.89°56'20"E, 685.42 FEET TO THE WESTERLY LINE OF SAID HAGGERTY ROAD; THENCE S.00°03'40"W, 265.00 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING.

CONTAINING 3.93 ACRES  
APN: 22-24-476-030

**SOIL EROSION CONTROL - SEQUENCE OF OPERATION (NEW CONSTRUCTION)**

INSTALL CRUSHED CONCRETE ACCESS DRIVE AND TEMPORARY CULVERTS AT THE SITE ENTRANCE AS INDICATED ON THE PLANS.

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

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

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

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

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

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

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

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

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

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

**SOIL EROSION CONTROL**

CUTTING, FILLING AND GRADING SHALL BE MINIMIZED AND THE NATURAL TOPOGRAPHY OF THE SITE SHALL BE PRESERVED TO THE MAXIMUM POSSIBLE EXTENT WHERE SPECIFIC FINDINGS DEMONSTRATE THAT MAJOR ALTERATIONS WILL STILL MEET THE PURPOSES AND REQUIREMENTS OF THIS ORDINANCE.

DEVELOPMENT SHALL BE STAGED TO KEEP THE EXPOSED AREAS OF SOIL AS SMALL AS PRACTICABLE.

SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED BETWEEN THE DISTURBED AREA AND ANY WATERCOURSES, INCLUDING RIVERS, STREAMS, CREEKS, LAKES, PONDS AND OTHER WATERCOURSES, WETLANDS; OR ROADWAYS OR ON NEAR THE SITE.

SEDIMENT RESULTING FROM ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE THAT WATER LEAVES THE SITE.

TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR AWAY FROM THE SITE SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.

TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE REMOVED AFTER PERMANENT SOIL EROSION CONTROL MEASURES HAVE BEEN IMPLEMENTED. ALL SITES SHALL BE STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES.

IF LAKES, PONDS, CREEKS, STREAMS, OR WETLANDS ARE LOCATED ON OR NEAR THE SITE, EROSION CONTROL MEASURES WHICH DIVERT RUNOFF AND TRAP SEDIMENT MUST BE PROVIDED AT STRATEGIC LOCATIONS. STRAW BALE BERRMS MAY BE USED AS TEMPORARY STORMWATER DIVERSION STRUCTURES, BUT WILL NOT BE CONSIDERED SUFFICIENT FOR TRAPPING SEDIMENT. THE USE OF SEDIMENT BASINS, FILTER FABRIC, VEGETATED BUFFER STRIPS, AND ROCK FILTERS IN LIEU OF STRAW BALE BERRMS SHALL BE STRONGLY ENCOURAGED. OTHER MEASURES MAY BE REQUIRED IF REASONABLY DETERMINED TO BE NECESSARY TO PROTECT A WATERCOURSE OR WETLAND.

WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHEN SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED.

PERMANENT EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 (FIFTEEN) CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.

VEGETATED BUFFER STRIPS SHALL BE CREATED OR RETAINED ALONG THE EDGES OF ALL LAKES, PONDS, CREEKS, STREAMS, OTHER WATERCOURSES, OR WETLANDS.

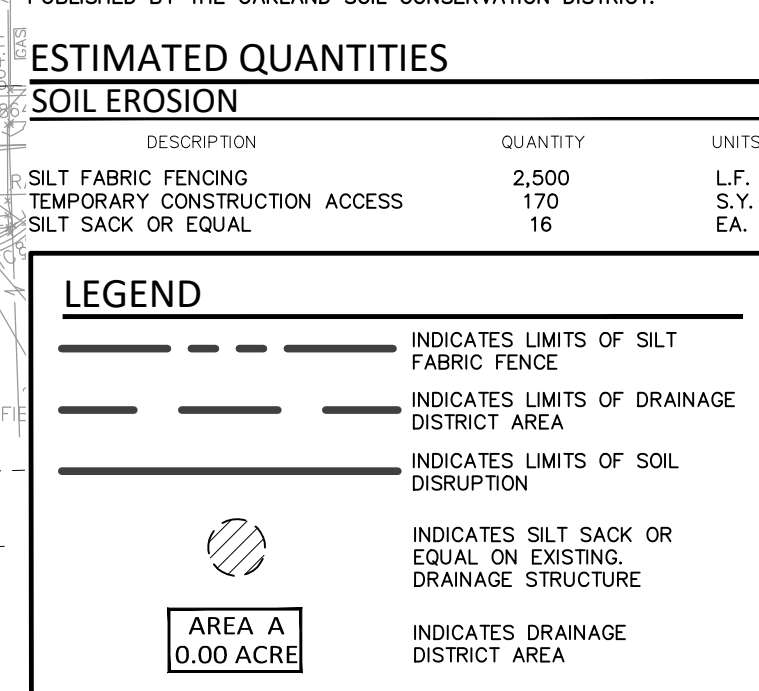
EROSION AND SEDIMENTATION CONTROL MEASURES SHALL RECEIVE REGULAR MAINTENANCE TO ASSURE PROPER FUNCTIONING.

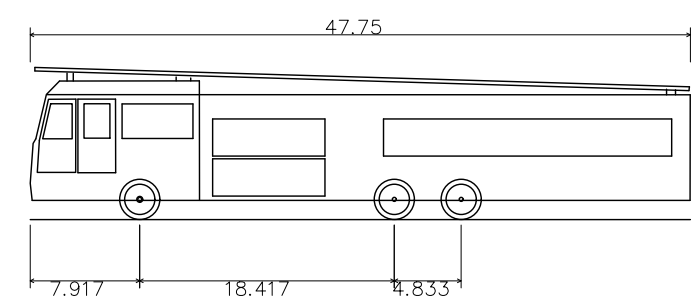
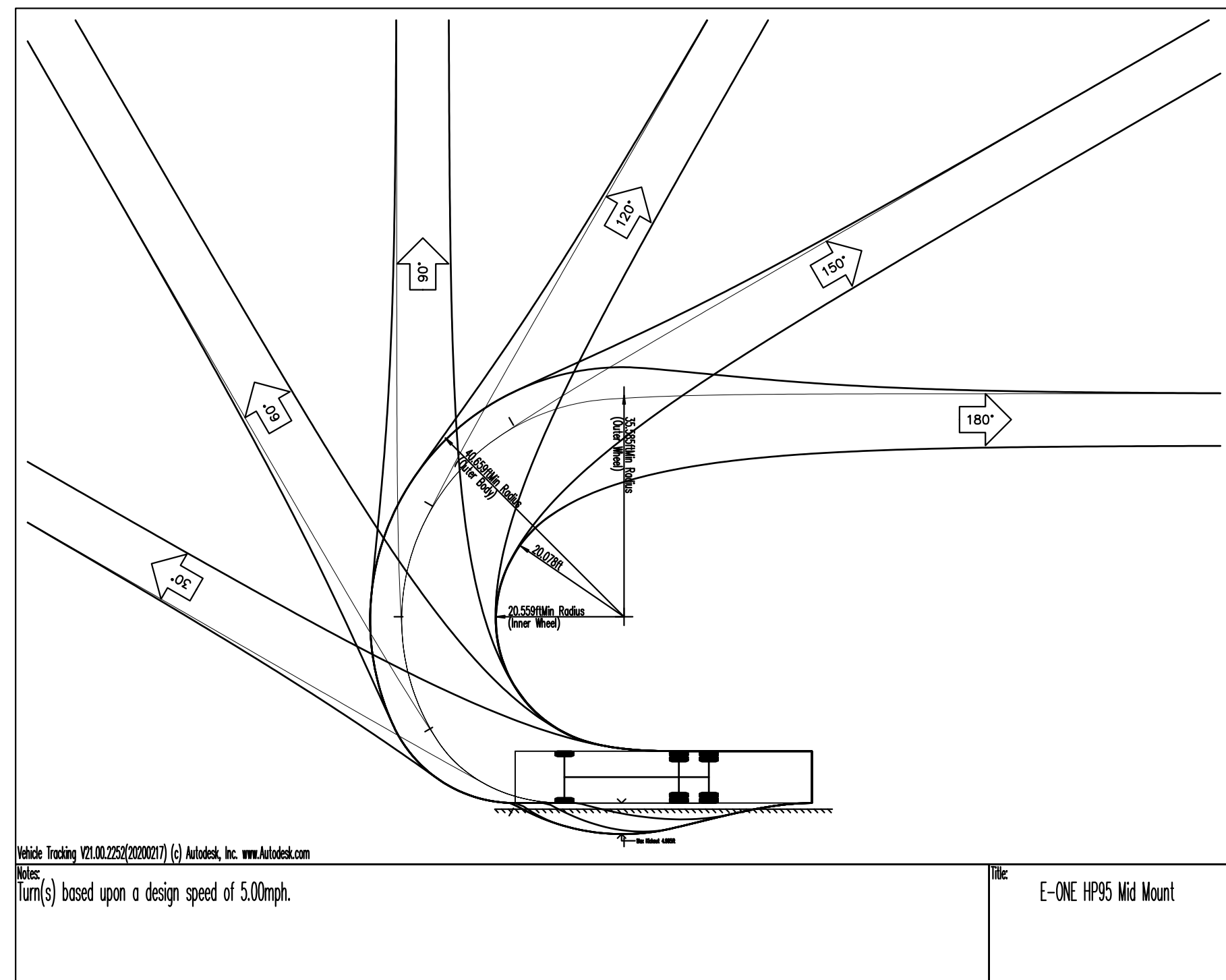
ALL GRADING PLANS AND SPECIFICATIONS, INCLUDING EXTENSIONS OF PREVIOUSLY APPROVED PLANS, SHALL INCLUDE PROVISIONS FOR EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE STANDARDS CONTAINED IN THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", PUBLISHED BY THE OAKLAND COUNTY CONSERVATION DISTRICT.

**ESTIMATED QUANTITIES**

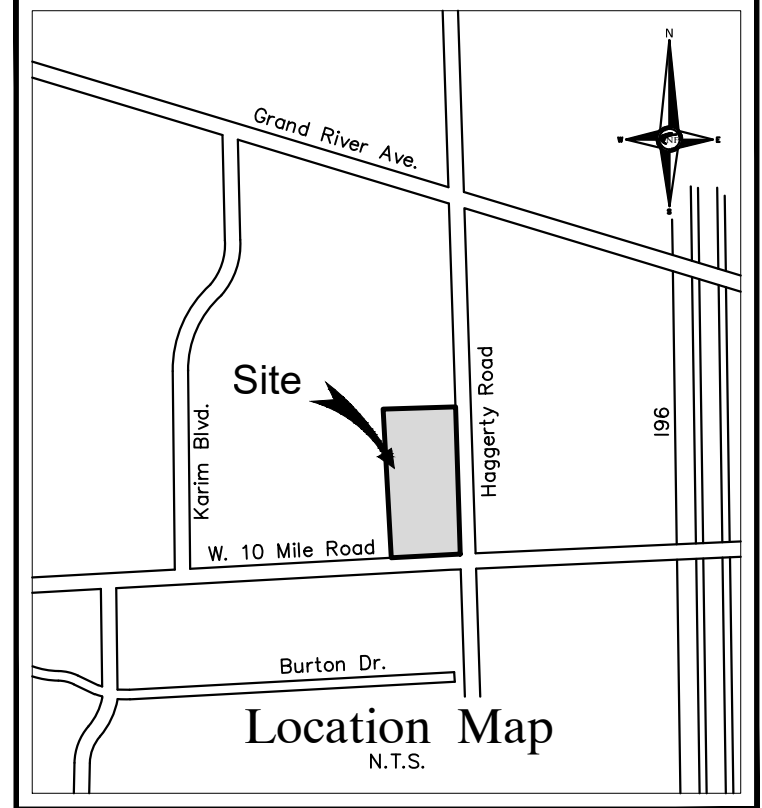
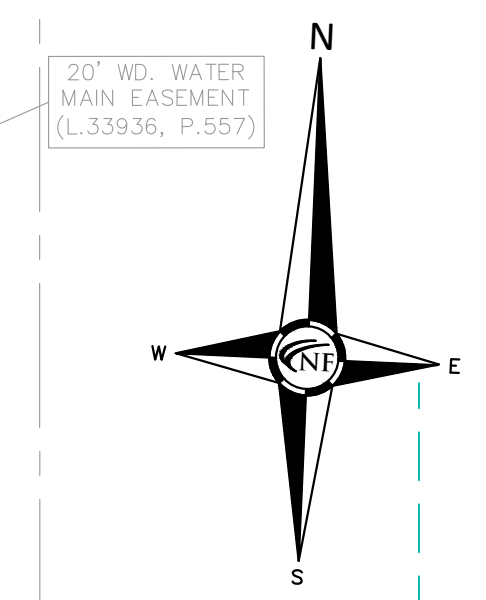
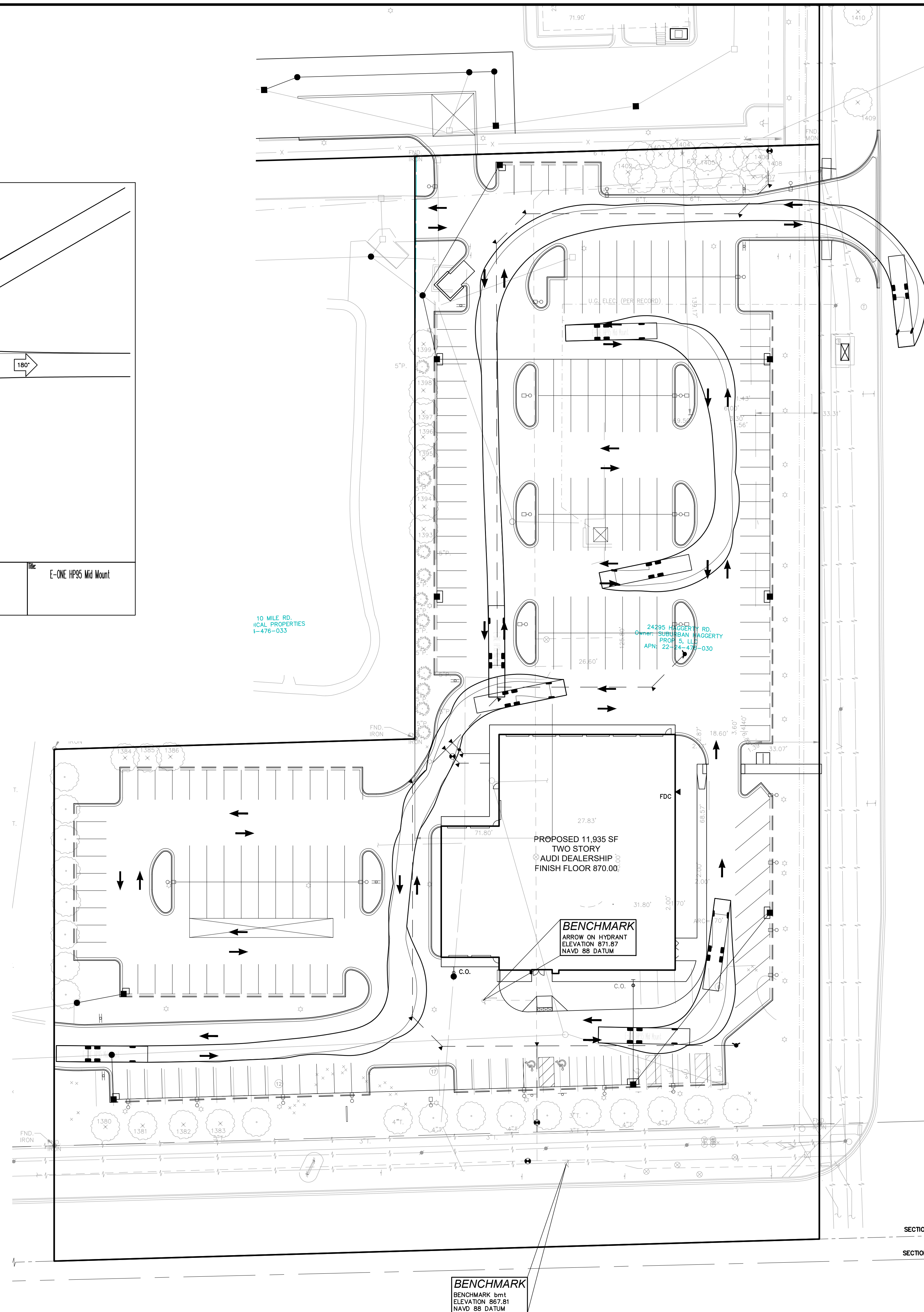
**SOIL EROSION**

DESCRIPTION	QUANTITY	UNITS
SILT FABRIC FENCING	2,500	LF.
TEMPORARY CONSTRUCTION ACCESS	170	S.Y.
SILT SACK OR EQUAL	16	EA.

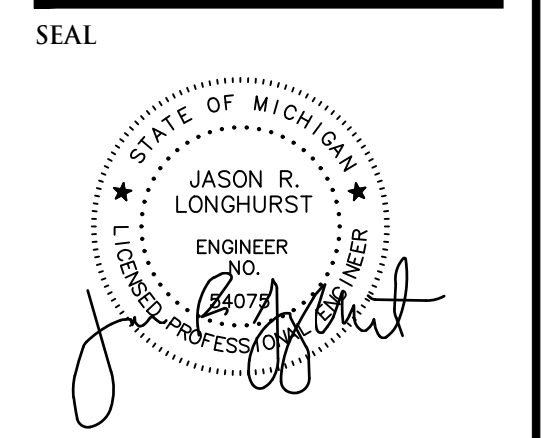




E-ONE HP95 Mid Mount  
 Overall Length 47.750ft  
 Overall Width 8.333ft  
 Overall Body Height 11.000ft  
 Min Body Ground Clearance 1.393ft  
 Track Width 8.333ft  
 Lock-to-lock time 6.00s  
 Max Wheel Angle 45.00°



**NF ENGINEERS**  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 LAND PLANNERS  
 NOWAK & FRAUS ENGINEERS  
 4677 WOODWARD AVE.  
 PONTIAC, MI 48342-5032  
 TEL. (248) 332-7931  
 FAX. (248) 332-8257  
 WWW.NOWAKFRAUS.COM



PROJECT  
 Lithia Motors, Inc.  
 - Audi of Novi

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

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

PROJECT LOCATION  
 Part of the Southeast 1/4 of  
 Section 24, Town 1 North,  
 Range 8 East, City of Novi,  
 Oakland County, Michigan

SHEET  
 Truck Maneuvering Plan



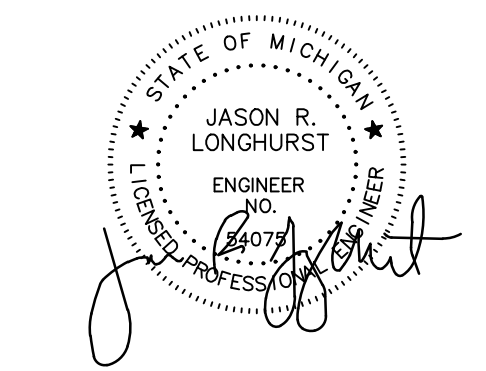
DATE ISSUED/REVISED  
 2022-03-09 ISSUED FOR SITE PLAN REVIEW

DRAWN BY:  
 T. Wood  
 DESIGNED BY:  
 T. Wood  
 APPROVED BY:  
 J. Longhurst  
 DATE:  
 March 9, 2022

SCALE: 1" = 30'  
 30 15 0 15 30 45

NFE JOB NO. SHEET NO.  
**1921-03 C6**

SEAL



PROJECT  
Lithia Motors, Inc.  
- Audi of Novi

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

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

PROJECT LOCATION  
Part of the Southeast 1/4 of  
Section 24, Town 1 North,  
Range 8 East, City of Novi,  
Oakland County, Michigan

SHEET  
Notes and Details



DATE ISSUED/REVISED  
2022-03-09 ISSUED FOR SITE PLAN REVIEW

DRAWN BY:  
T. Wood  
DESIGNED BY:  
T. Wood  
APPROVED BY:  
J. Longhurst  
DATE:  
March 9, 2022  
SCALE: N.T.S.

**UTILITIES**

AT LEAST 72 HOURS (3 WORKING DAYS) PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY 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.

**DEWATERING OF TRENCH AND EXCAVATIONS**

IF NOT SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION DESIGN DOCUMENTS, THE DESIGN OR QUALITATIVE ANALYSIS OF GROUND WATER DEWATERING SYSTEMS IS BEYOND THE SCOPE OF DESIGN FOR THESE DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND PROVIDING APPROPRIATE EXCAVATION DEWATERING SYSTEMS FOR USE DURING CONSTRUCTION.

THE DEWATERING METHOD SELECTED BY THE CONTRACTOR WILL NOT ADVERSELY AFFECT ADJACENT PAVEMENTS OR STRUCTURES PRIOR TO BEGINNING DEWATERING CONDITIONS. MEANS AND METHODS OF DEWATERING ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF DEWATERING WILL BE CONSIDERED INCLUDED IN THE WORK OF CONSTRUCTING THE UNDERGROUND UTILITIES UNLESS SPECIFICALLY INDICATED OTHERWISE.

**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.

**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 PUMPING, 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 REMOVAL PAVEMENT CORE SAMPLES ARE FOR INFORMATIONAL PURPOSES ONLY AS TO THE THICKNESS OF THE PAVEMENT AT THE LOCATION OF THE SAMPLE. THE OWNER AND ENGINEER MAKE NO REPRESENTATION, WARRANTY OR GUARANTY THAT THE SAMPLES ACCURATELY REFLECT THE PAVEMENT THICKNESS ON THE PROJECT.

**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'S EQUIPMENT AND OPERATIONS ON PUBLIC STREETS SHALL BE GOVERNED BY ALL APPLICABLE LOCAL, COUNTY AND STATE ORDINANCES, REGULATIONS AND LAWS. 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 MDOT, 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 NFE MAKE NO REPRESENTATIONS, WARRANTY OR GUARANTY 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.

**SUB-SOIL CONDITIONS**

ANY 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 MANNER BY THE 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.

**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 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.

**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 CUT MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR, IN A LIKE MANNER, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMPORT APPROVED FILL MATERIAL AND PLACE IT AS REQUIRED TO ATTAIN THE SITE GRADE AND COMPACTION REQUIREMENTS PER THE ENGINEER'S PLAN AND 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.

**General Description:**

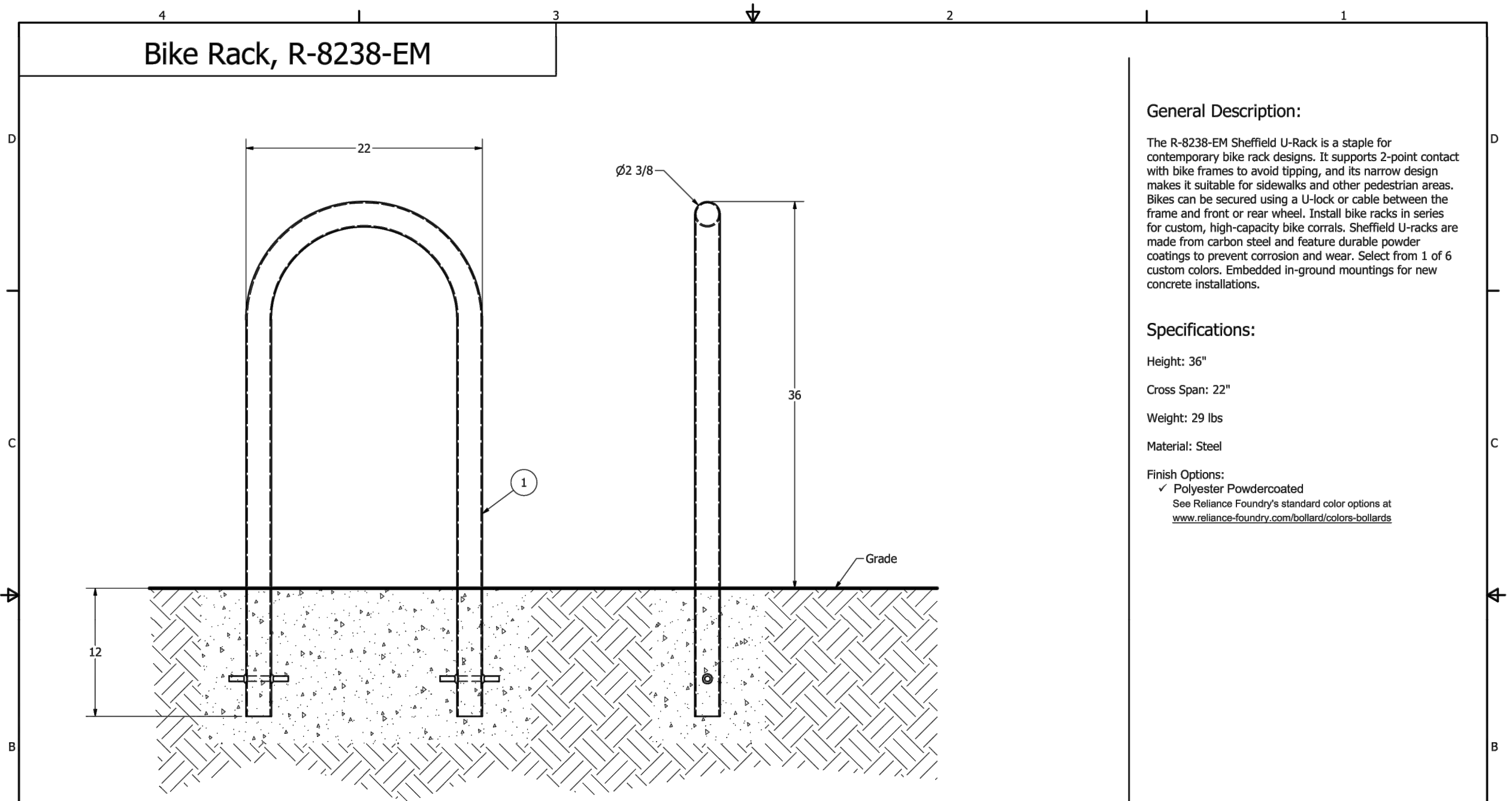
The R-8238-EM Sheffield U-Rack is a staple for contemporary bike rack designs. It supports 2-point contact with bike frames to avoid tipping, and its narrow design makes it suitable for sidewalks and other pedestrian areas. Bikes can be secured using a U-lock or cable between the frame and front or rear wheel. Install bike racks in series for custom, high-capacity bike corrals. Sheffield U-racks are made from carbon steel and feature durable powder coatings to prevent corrosion and wear. Select from 1 of 6 custom colors. Embedded in-ground mountings for new concrete installations.

**Specifications:**

Height: 36"  
Cross Span: 22"  
Weight: 29 lbs  
Material: Steel

**Finish Options:**

✓ Polyester Powdercoated  
See Reliance Foundry's standard color options at [www.reliance-foundry.com/bollards/colors-bollards](http://www.reliance-foundry.com/bollards/colors-bollards)



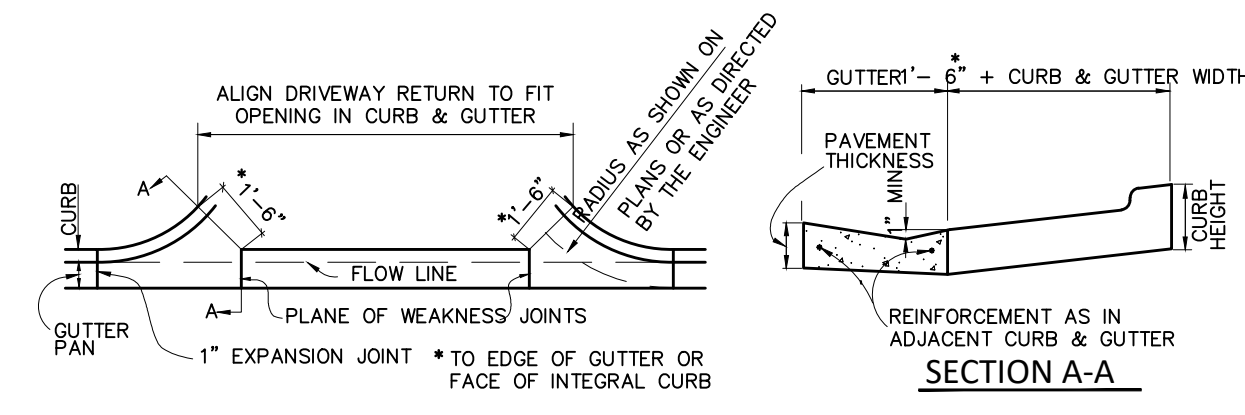
- Notes:**
- Embedment details are for reference illustration only. Minimum foundation sizes depend on local soil conditions, weather conditions and engineering requirements.
  - Bike rack is provided as shown with parts listed below. Concrete foundation and/or installation not provided by Reliance Foundry.
  - This drawing is not drawn to scale. Dimensions provided herein are for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.
  - Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

**RELIANCE FOUNDRY**  
SINCE 1925  
Unit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canada  
1-877-789-3245 info@reliance-foundry.com  
[www.reliance-foundry.com](http://www.reliance-foundry.com)

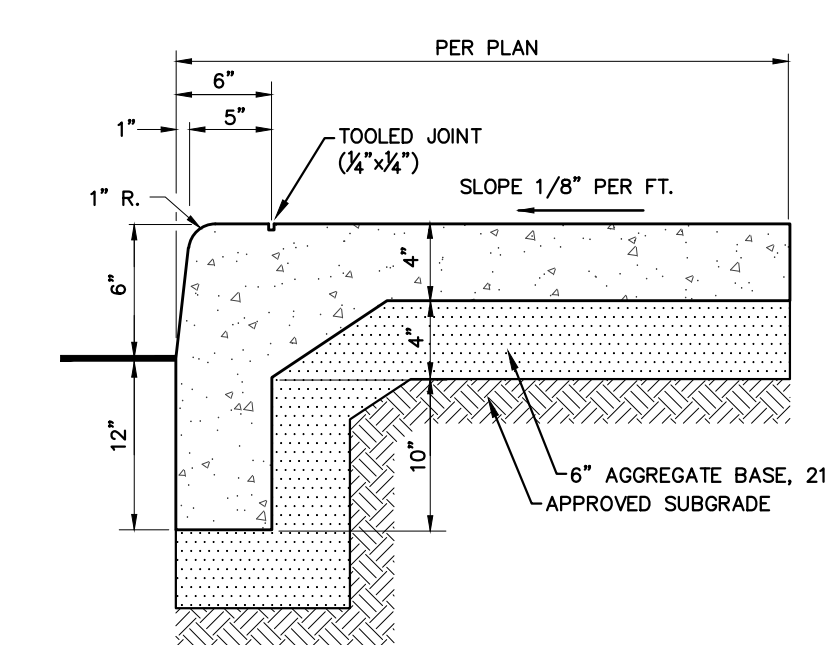
TITLE  
**Bike Rack, R-8238-EM**

PARTS LIST						
ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	WEIGHT	SIZE
1	1	R8238EM	Bike Rack R8238EM	Steel Powder Coated	29 lbs	C

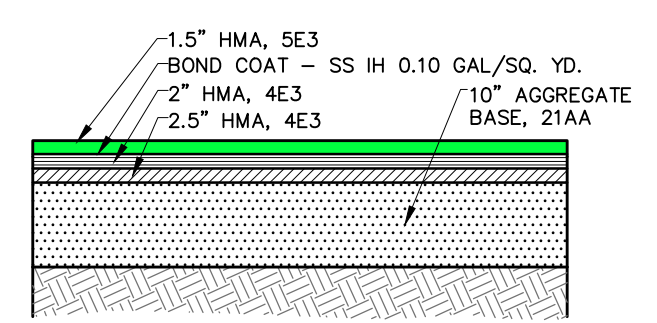
NOT TO SCALE SHEET 1 OF 2



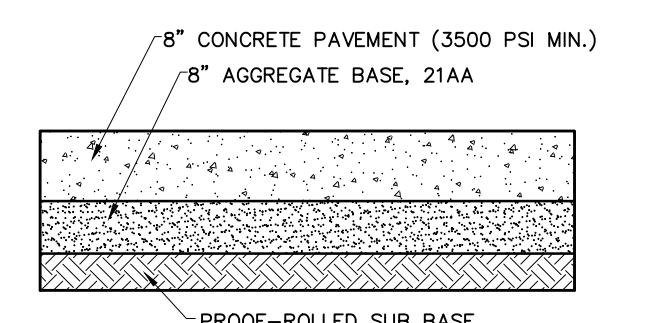
MDOT DRIVEWAY OPENING DETAIL 'M'  
N.T.S.



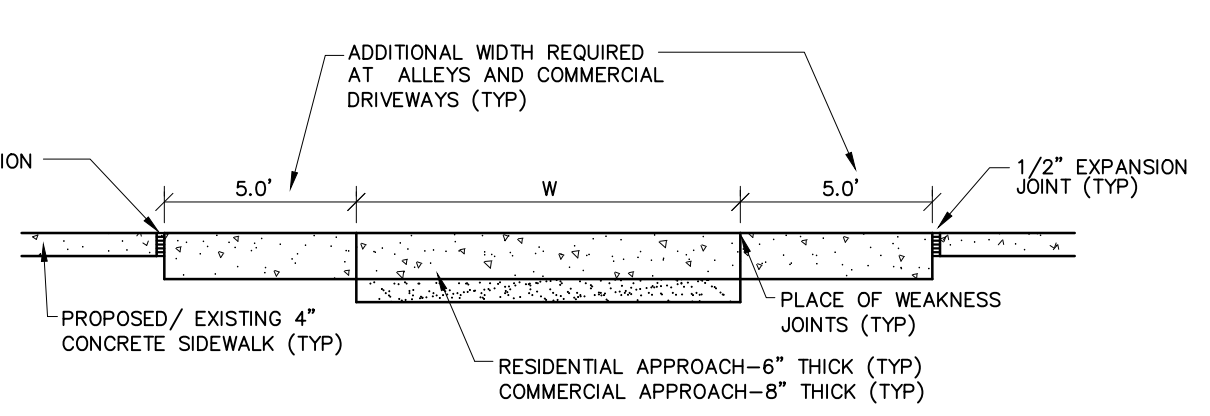
6" MONOLITHIC CURB AND WALK  
N.T.S.



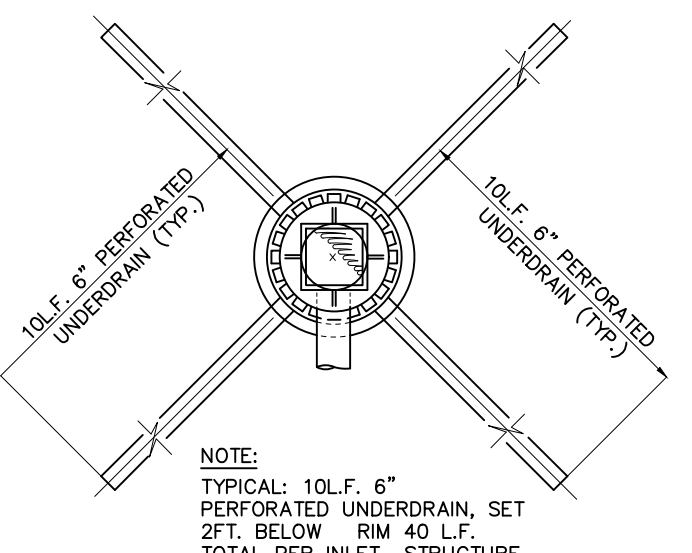
6" ASPHALT PAVEMENT SECTION  
N.T.S.



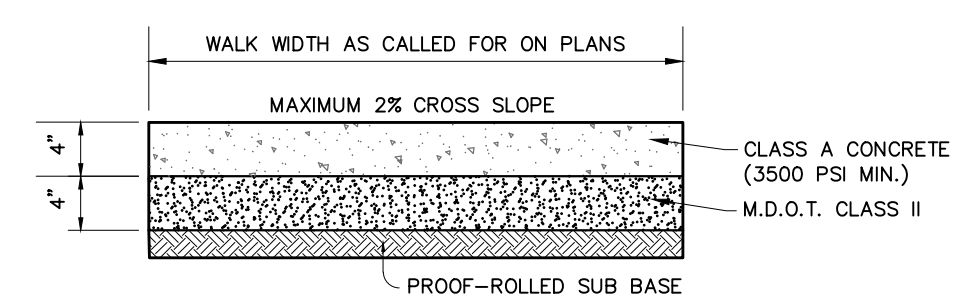
CONCRETE PAVEMENT SECTION  
N.T.S.



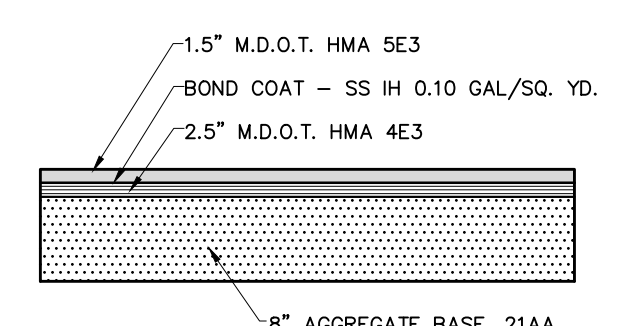
COMMERCIAL CONCRETE SIDEWALK DETAIL  
N.T.S.



UNDERDRAIN DETAIL  
N.T.S.

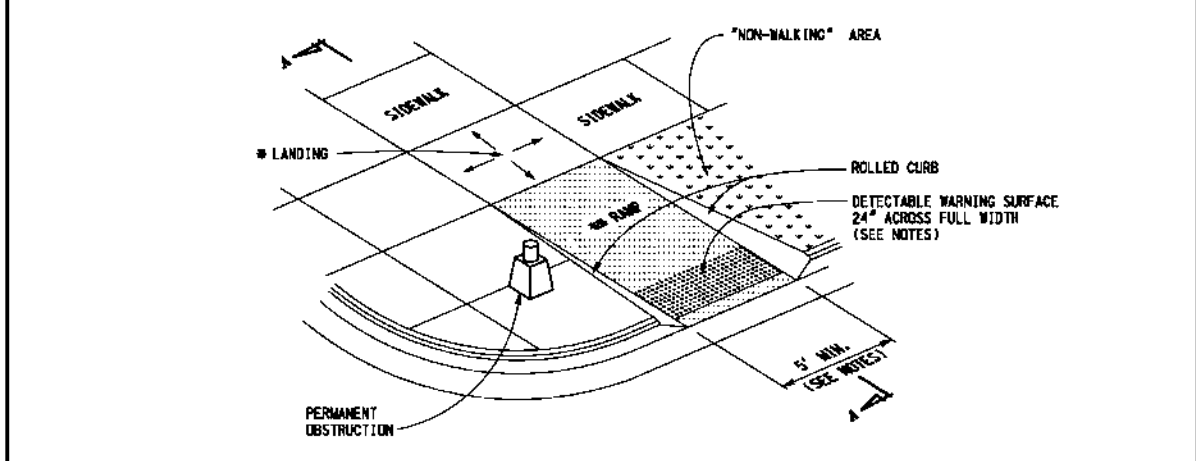


CONCRETE SIDEWALK SECTION  
N.T.S.

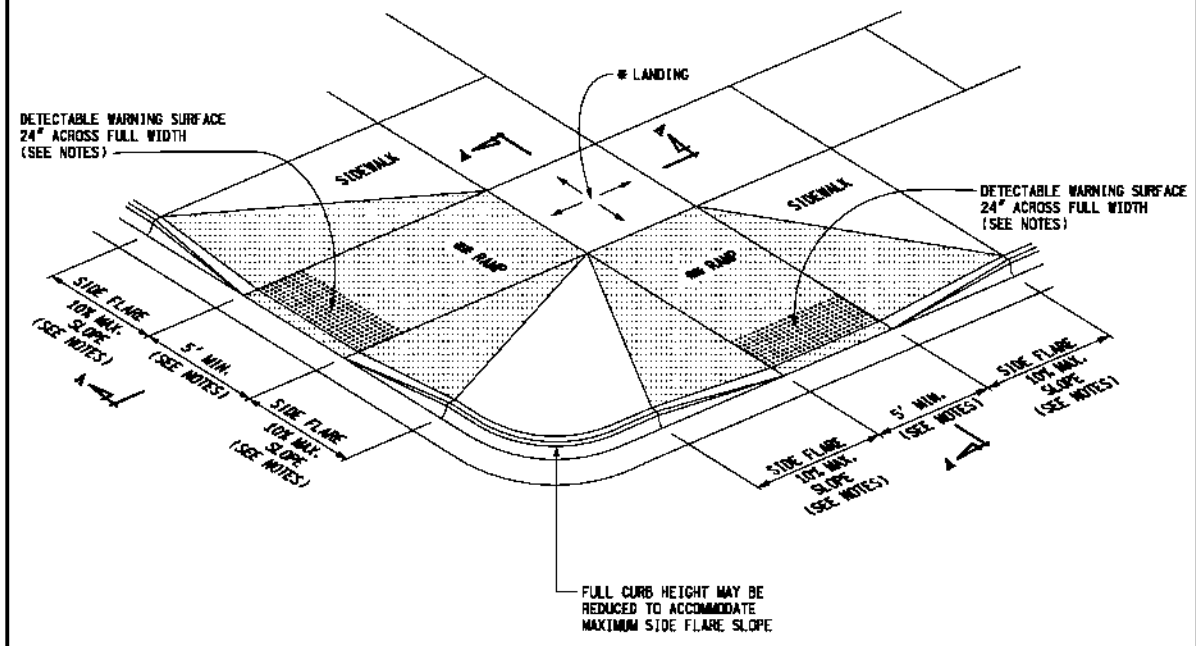


ASPHALT PAVEMENT SECTION  
N.T.S.

MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' X 5'. SEE NOTES.  
 MAXIMUM RAMP CROSS SLOPE IS 2.0% RUNNING SLOPE IS - TO 18.75 MAXIMUM. SEE NOTES.



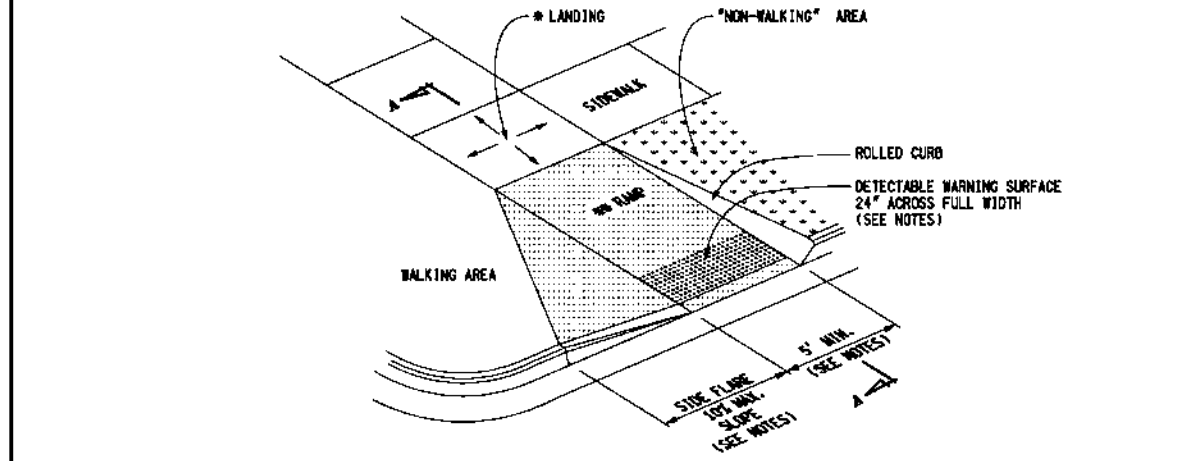
**SIDEWALK RAMP TYPE R**  
(ROLLED SIDES)



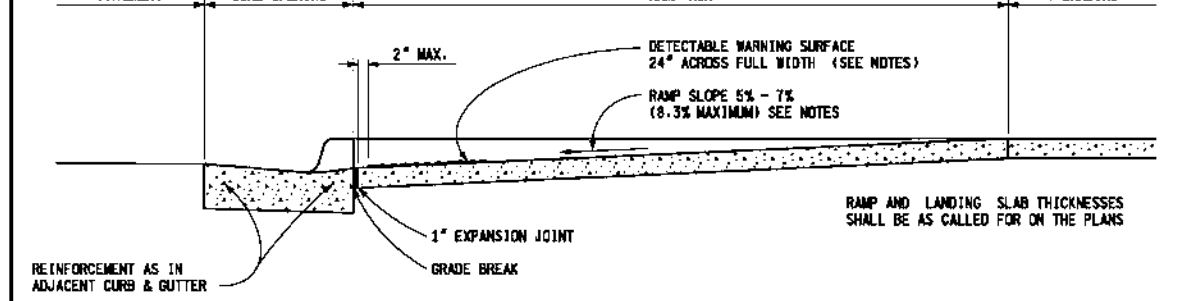
**SIDEWALK RAMP TYPE F**  
(FLARED SIDES - TWO RAMPS SHOWN)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 1 OF 1	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 2 OF 1	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 3 OF 1	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 4 OF 1
---	---	---	---

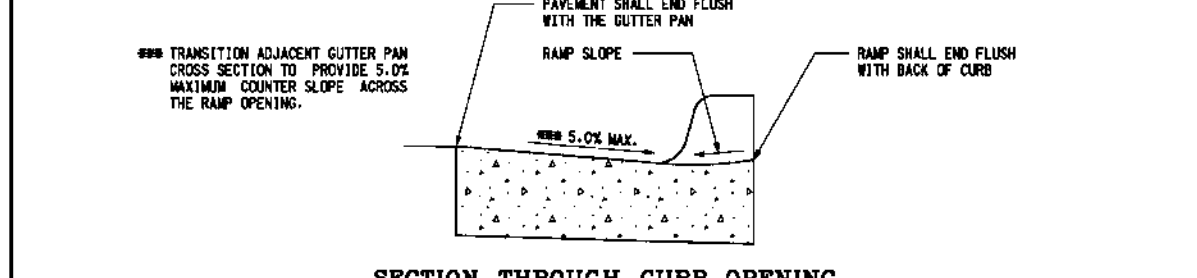
MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' X 5'. SEE NOTES.  
 MAXIMUM RAMP CROSS SLOPE IS 2.0% RUNNING SLOPE IS - TO 18.75 MAXIMUM. SEE NOTES.



**SIDEWALK RAMP TYPE RP**  
(ROLLED / FLARED SIDES)



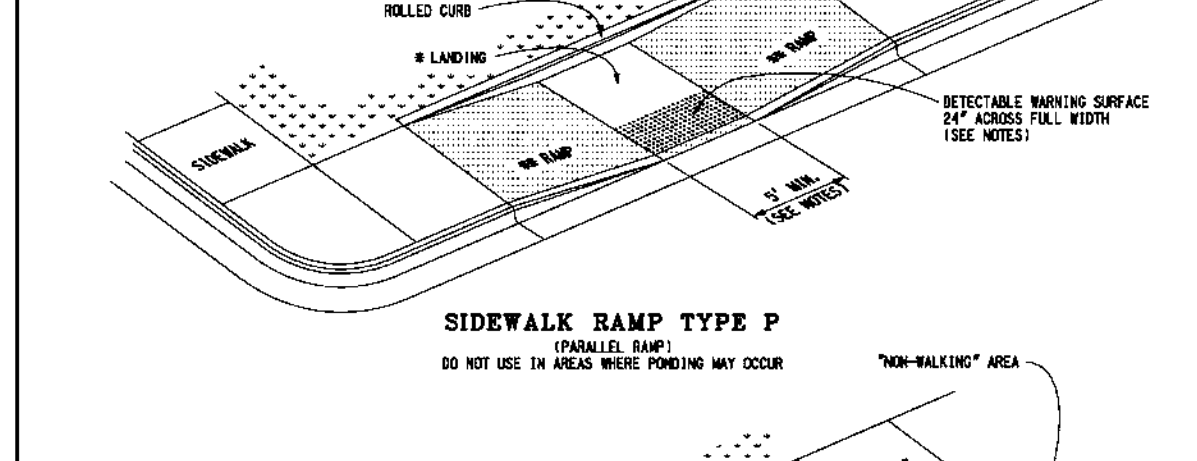
**SECTION A-A**



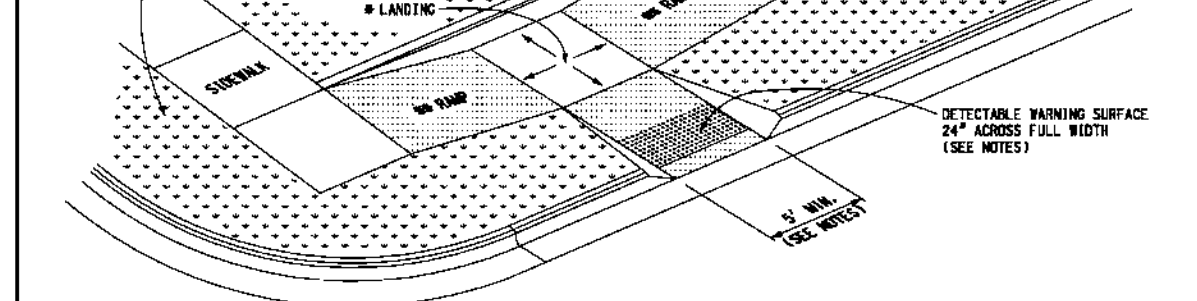
**SECTION THROUGH CURB OPENING**  
(TYPICAL ALL RAMP TYPES)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 2 OF 1	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 3 OF 1	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 4 OF 1
---	---	---

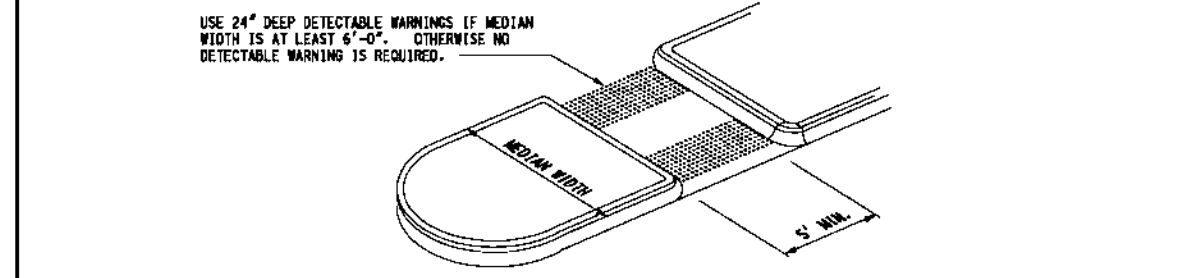
MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' X 5'. SEE NOTES.  
 MAXIMUM RAMP CROSS SLOPE IS 2.0% RUNNING SLOPE IS - TO 18.75 MAXIMUM. SEE NOTES.



**SIDEWALK RAMP TYPE P**  
(PARALLEL RAMP)



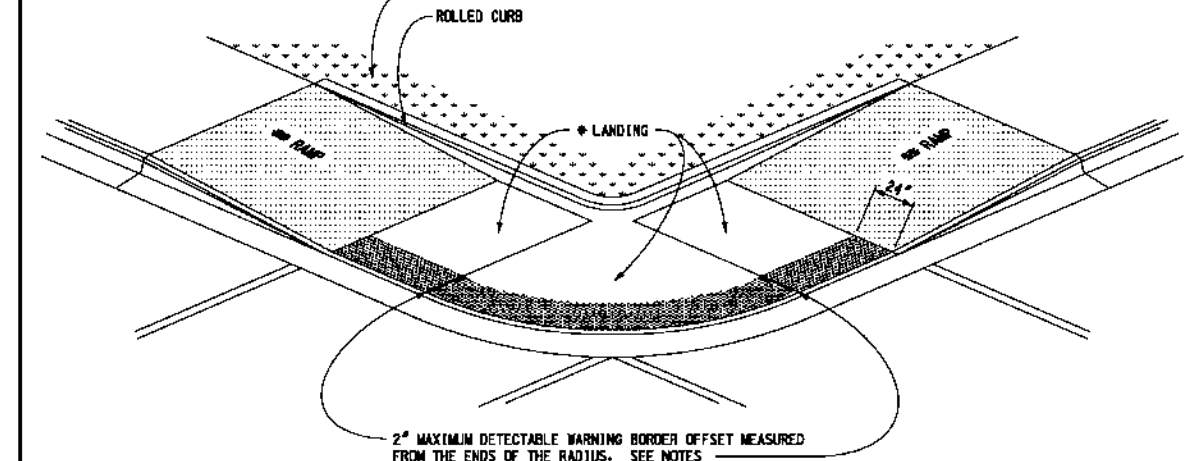
**SIDEWALK RAMP TYPE C**  
(COMBINATION RAMP)



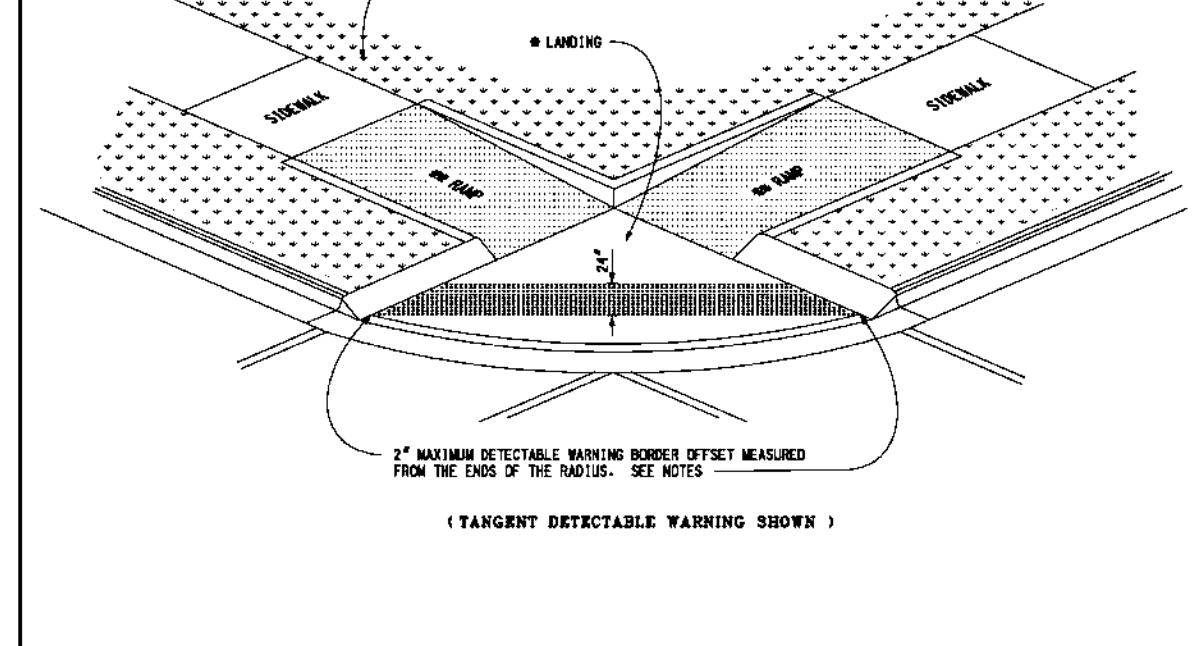
**SIDEWALK RAMP TYPE M**  
(MEDIAN ISLAND)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 3 OF 1	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 4 OF 1
---	---

MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' X 5'. SEE NOTES.  
 MAXIMUM RAMP CROSS SLOPE IS 2.0% RUNNING SLOPE IS - TO 18.75 MAXIMUM. SEE NOTES.

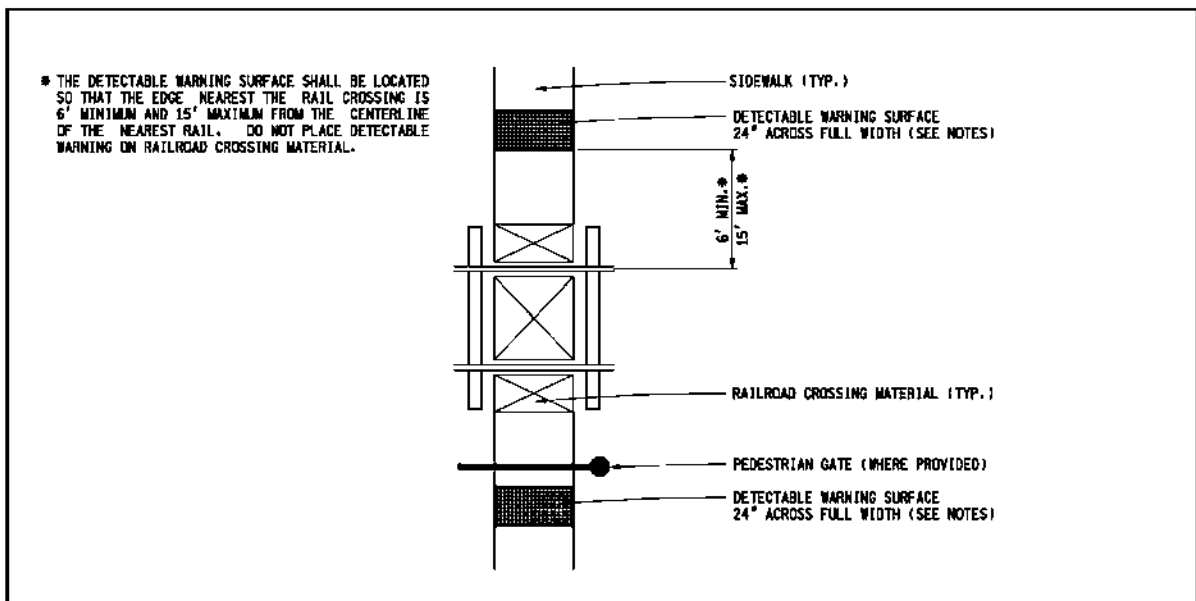


**SIDEWALK RAMP TYPE D**  
(INWARD CORNER)

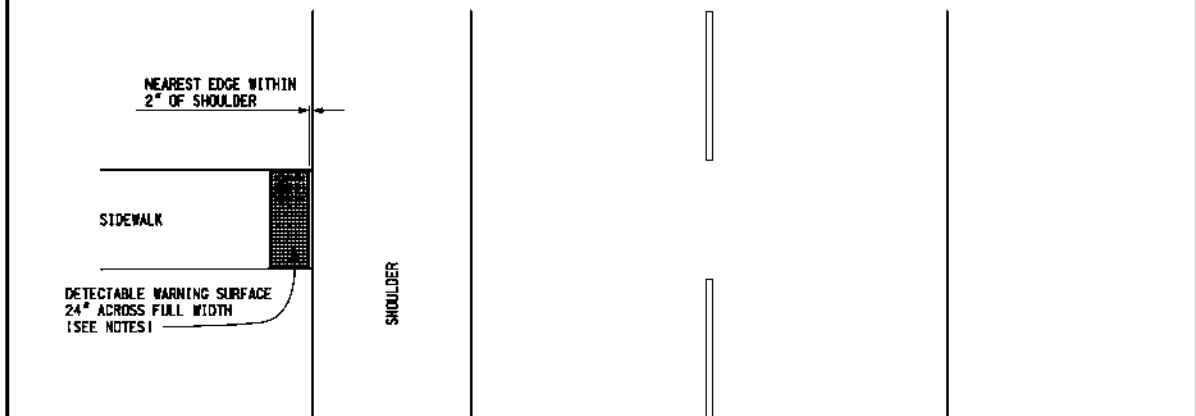


**SIDEWALK RAMP TYPE D**  
(OUTWARD CORNER)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 4 OF 1
---

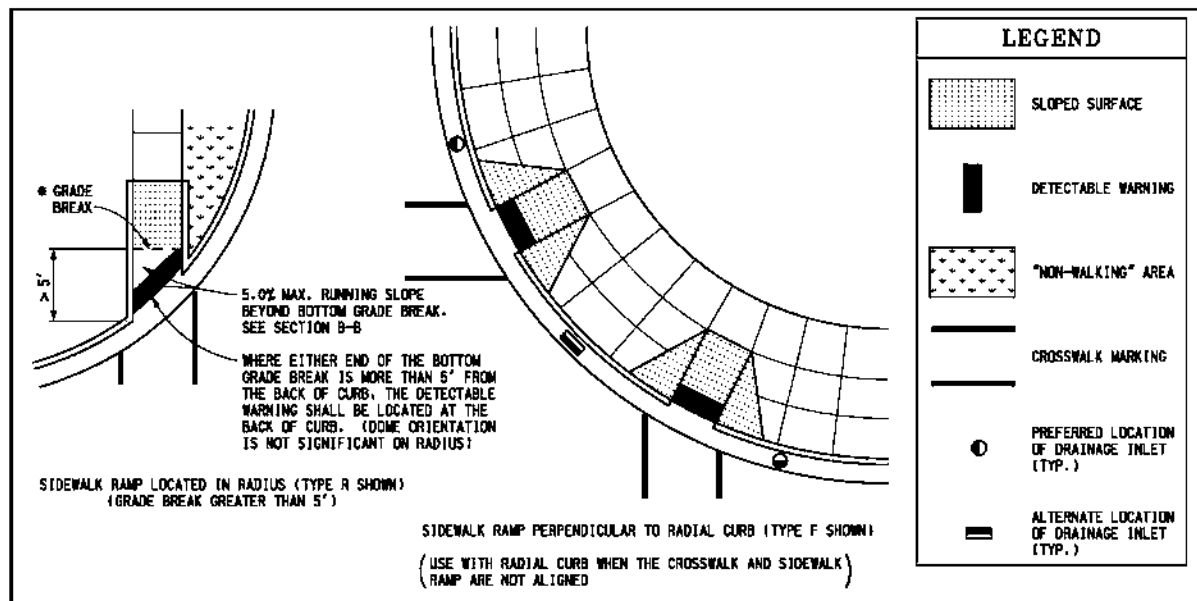


**DETECTABLE WARNING AT RAILROAD CROSSING**

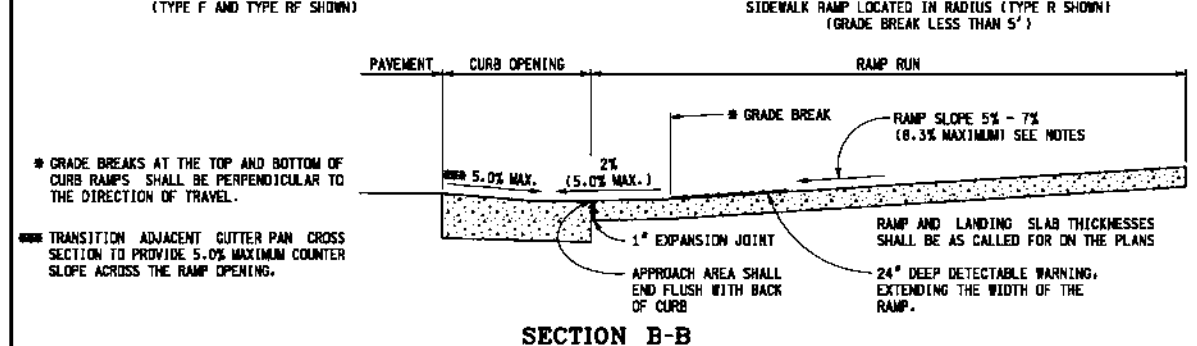
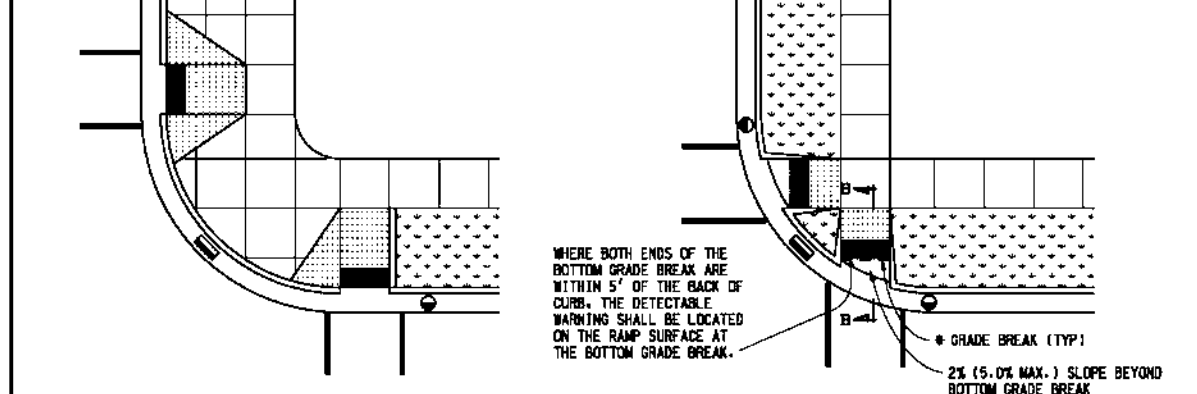


**DETECTABLE WARNING AT FLUSH SHOULDER OR ROADWAY**

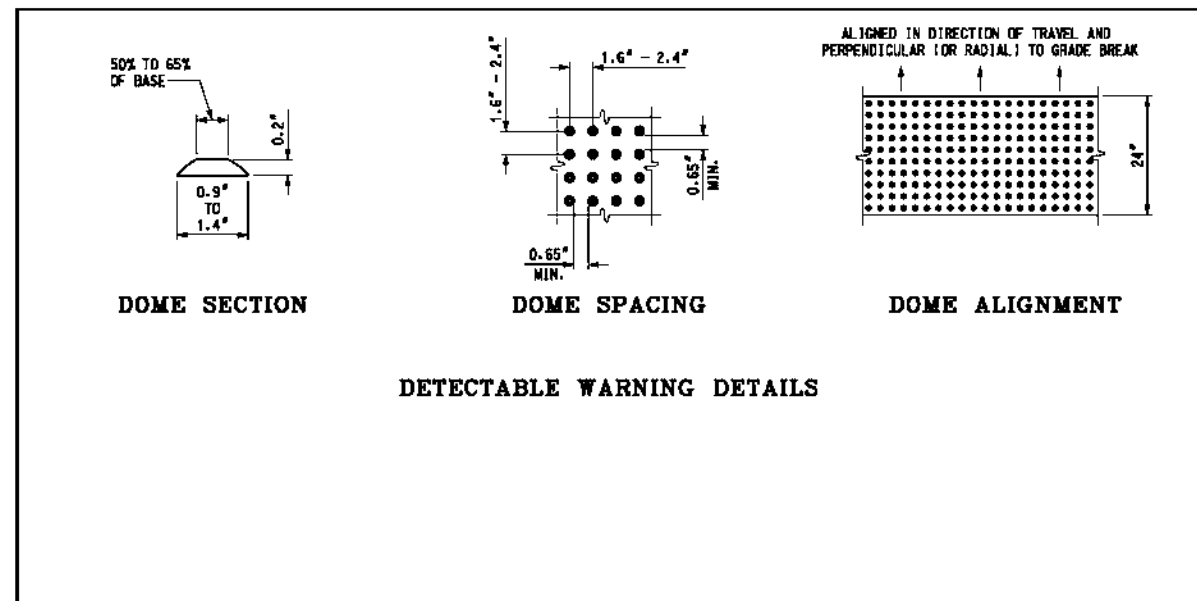
MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 5 OF 1	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 6 OF 1
---	---



**SIDEWALK RAMP ORIENTATION**



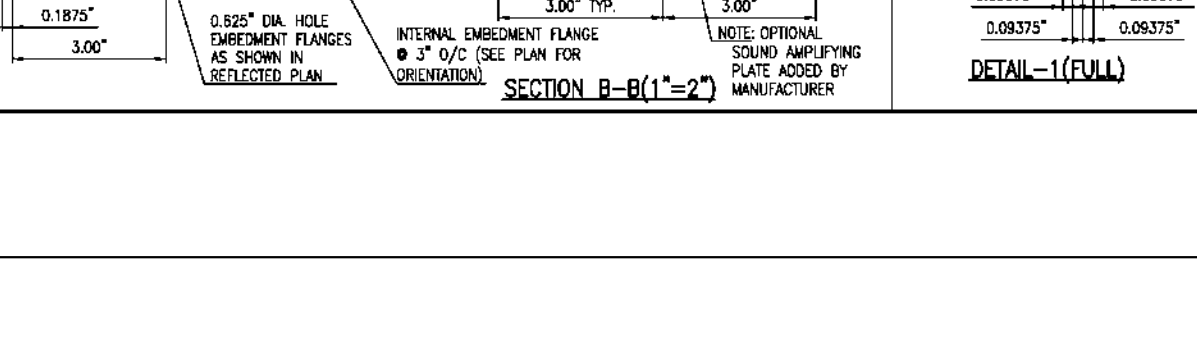
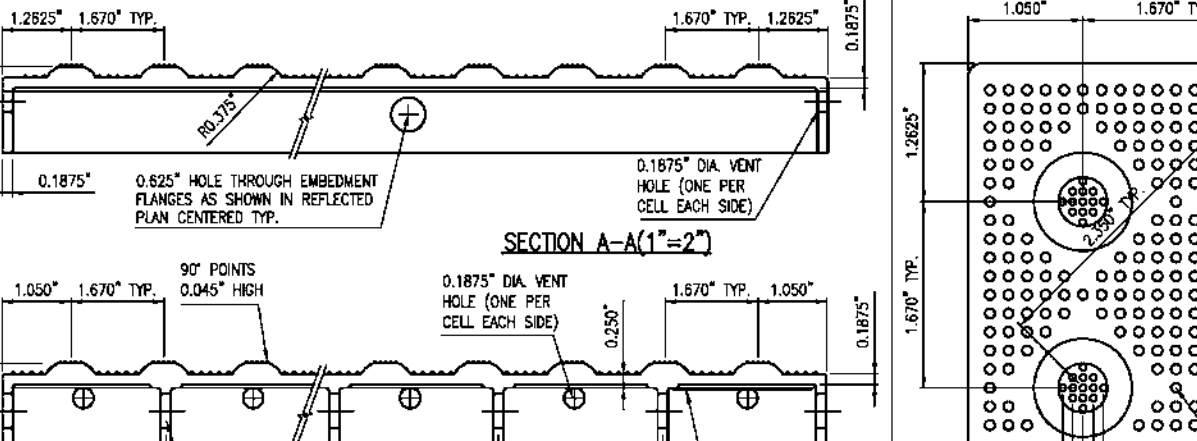
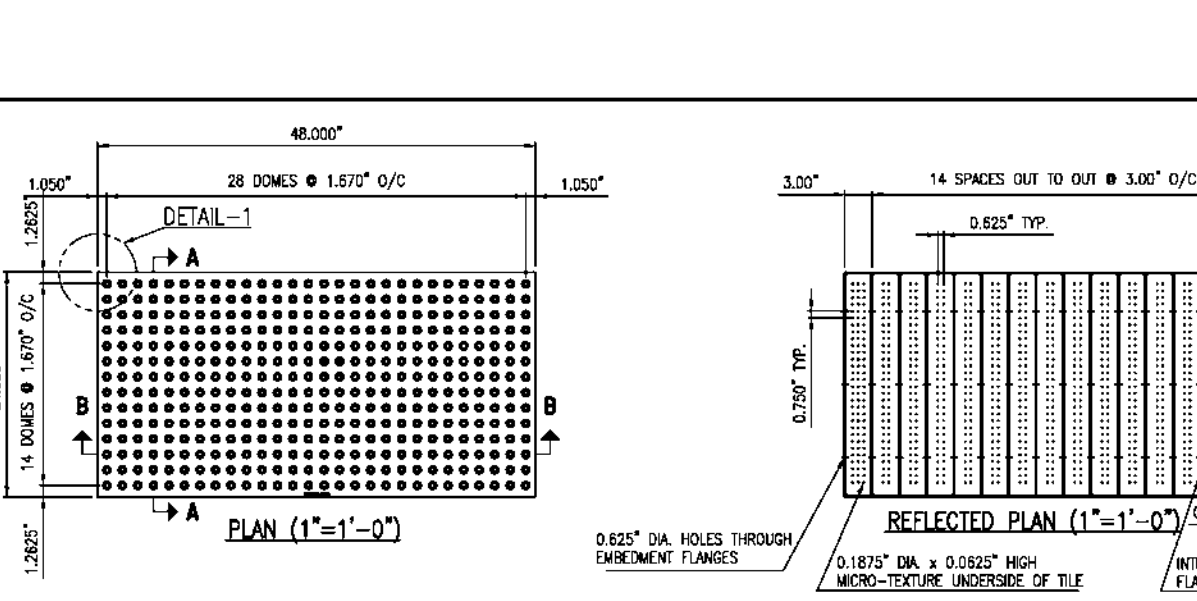
MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 6 OF 1	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 1 OF 1
---	---



**DETECTABLE WARNING DETAILS**

**NOTES:**  
 DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.  
 SIDEWALK RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.  
 RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT NAMED AND/OR STABILIZED MID-BLOCK CROSSINGS.  
 SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE RUNNING SLOPE.  
 SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.  
 CURB SHALL BE FLUSH TO INSURE A UNIFORM GRADE ON THE RAMP, WHERE CONDITIONS PERMIT. IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.  
 RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SHOW SIGNAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.  
 WHEN 5' MINIMUM WIDTH IS NOT FEASIBLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDINGS TO NOT LESS THAN 4' X 4'.  
 DETECTABLE WARNING SURFACE OFFSET IS 24" WITHIN THE DIRECTION OF RAMP/TRAVEL AND THE FULL WIDTH OF THE RAMP/TRAVEL CROSSING. SIDEWALKS SHALL BE FLARED TO ACCOMMODATE SIDEWALK SHOW SIGNAL EQUIPMENT. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADII.  
 FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.0%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSLATED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSLATION SHALL BE APPLIED UNilaterally OVER THE FULL LENGTH OF THE RAMP.  
 THE MAXIMUM RUNNING SLOPE OF 0.75 IS RELATIVE TO A FLAT 100% REFERENCE. HOWEVER, IT SHALL NOT EXCEED ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH.  
 DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD BE PRECEDENT OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER'S ADA COMPLIANT GRATE. OPERATIONS SHALL NOT BE GREATER THAN 1/4". (SHARED OPERATIONS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.)  
 THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.  
 CURBS AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO NOT INTERFERE WITH OR CROSS THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS UNDERLINED BY LANDSCAPING. UNPAVED SURFACE OR PERMANENT FIBER SURFACES, WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURNS AT RAMP OPENINGS.  
 DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FULLY CAST UNITS CAST AND/OR FINISHED IN THE PAVEMENT TO RESIST SPLITTING OR HEAVING.

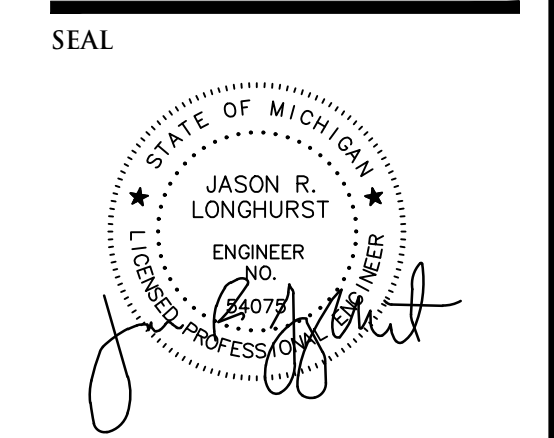
MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 1 OF 1
---



MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARDS PLAN FOR <b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b> SHEET <b>R-28-J</b> 1 OF 1
---



**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.  
 - Audi of Novi

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

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

PROJECT LOCATION  
 Part of the Southeast 1/4 of  
 Section 24, Town 1 North,  
 Range 8 East, City of Novi,  
 Oakland County, Michigan

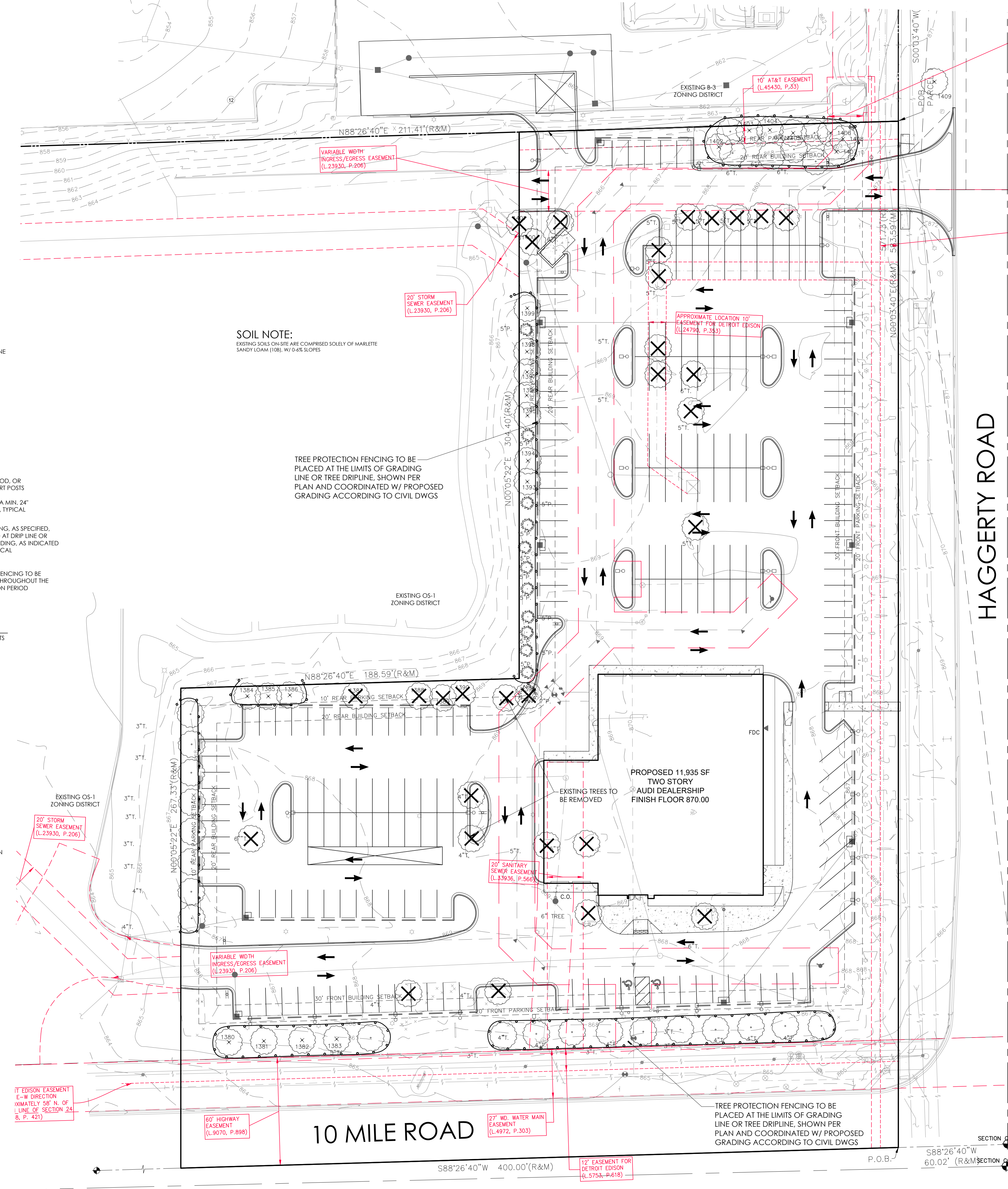
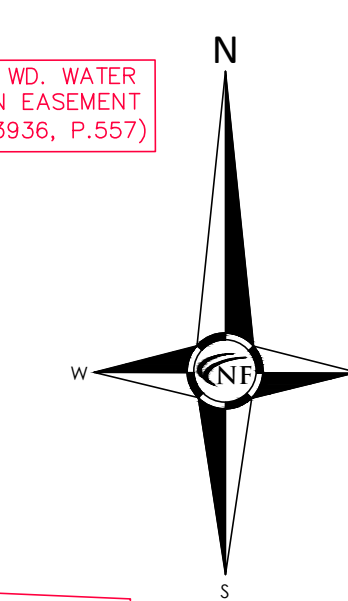
SHEET  
 Notes and Details



DATE ISSUED/REVISED  
 2022-03-09 ISSUED FOR SITE PLAN REVIEW

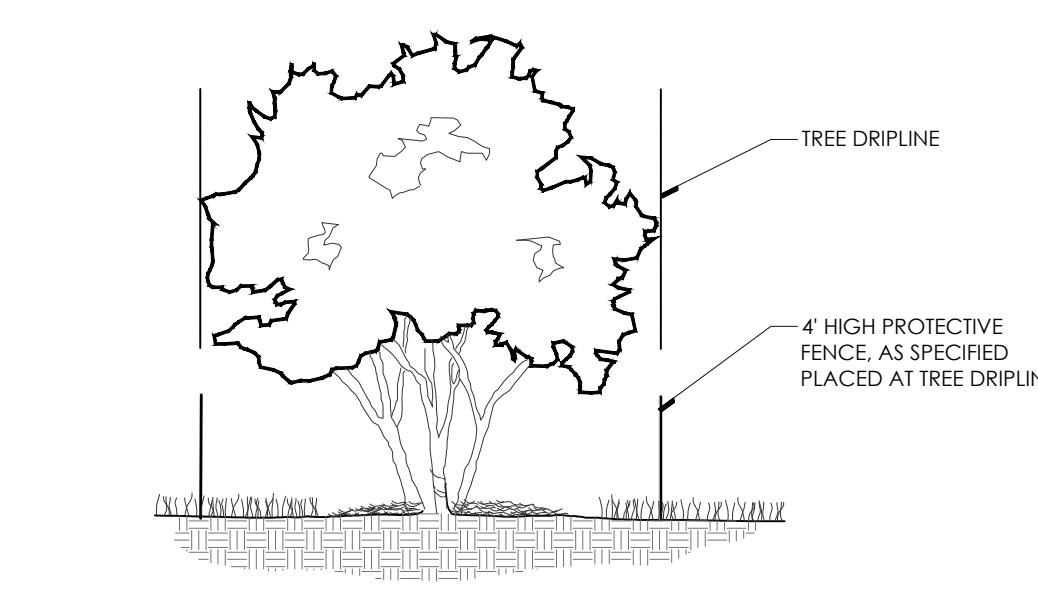
DRAWN BY:  
 T. Wood  
 DESIGNED BY:  
 T. Wood  
 APPROVED BY:  
 J. Longhurst  
 DATE:  
 March 9, 2022  
 SCALE: N.T.S.

NFE JOB NO. SHEET NO.  
**1921-03 C8**

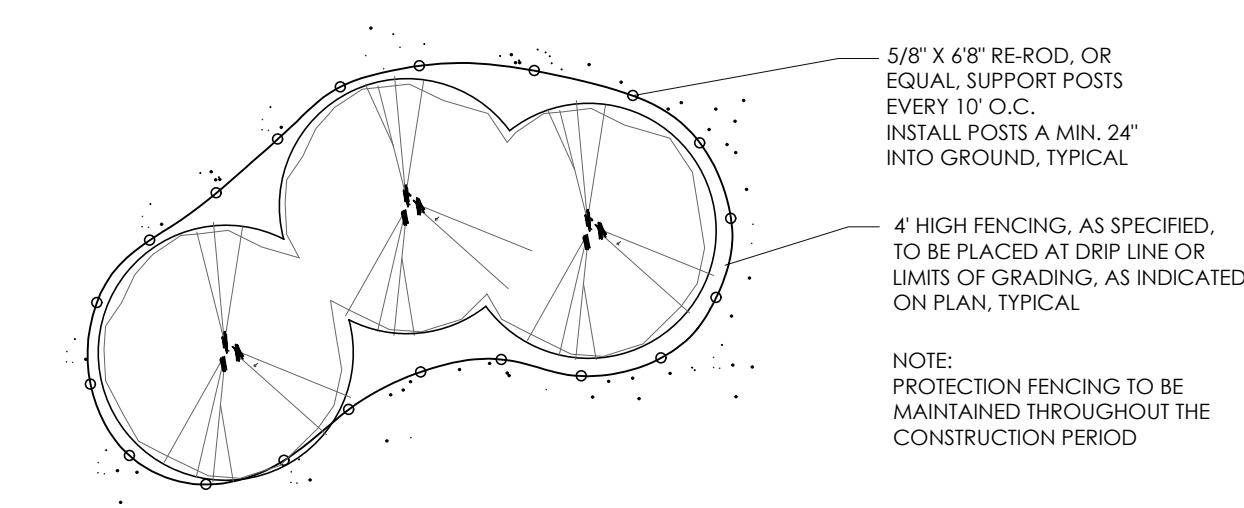


HAGGERTY ROAD

10 MILE ROAD



TREE PROTECTION DETAIL-SECTION



TREE PROTECTION DETAIL-PAN

**GENERAL TREE PROTECTION NOTES**

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

SOIL NOTE:  
EXISTING SOILS ON-SITE ARE COMPRISED SOLELY OF MARLETTE SANDY LOAM (10B), W/ 0-6% SLOPES

TREE PROTECTION FENCING TO BE PLACED AT THE LIMITS OF GRADING LINE OR TREE DRIFLINE, SHOWN PER PLAN AND COORDINATED W/ PROPOSED GRADING ACCORDING TO CIVIL DWGS

TREE PROTECTION FENCING TO BE PLACED AT THE LIMITS OF GRADING LINE OR TREE DRIFLINE, SHOWN PER PLAN AND COORDINATED W/ PROPOSED GRADING ACCORDING TO CIVIL DWGS

**TREE PRESERVATION SUMMARY:**

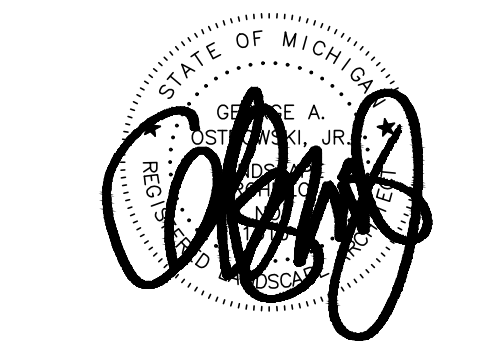
TOTAL NUMBER OF TREES SURVEYED:	87
TOTAL OFF-SITE TREES:	1
NET TREES ON-SITE:	86
TOTAL NUMBER OF TREES TO BE REMOVED:	30
TOTAL LANDMARK TREES TO BE REMOVED:	0
TOTAL NUMBER OF TREES TO REMAIN:	56

SITE IS NOT LOCATED WITHIN A REGULATED WOODLAND, THEREFORE REPLACEMENT TREES ARE NOT REQUIRED

**LEGEND:**

- (X) TREES TO BE REMOVED
- (950) TREES TO REMAIN
- (---) TREE PROTECTION FENCING

SEAL



PROJECT  
Lithia Motors, Inc.  
- Audi of Novi

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

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

PROJECT LOCATION  
Part of the Southeast 1/4 of Section 24, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan

SHEET  
Tree Preservation Plan



REVISIONS  
03/09/22 ISSUED FOR SITE PLAN REVIEW

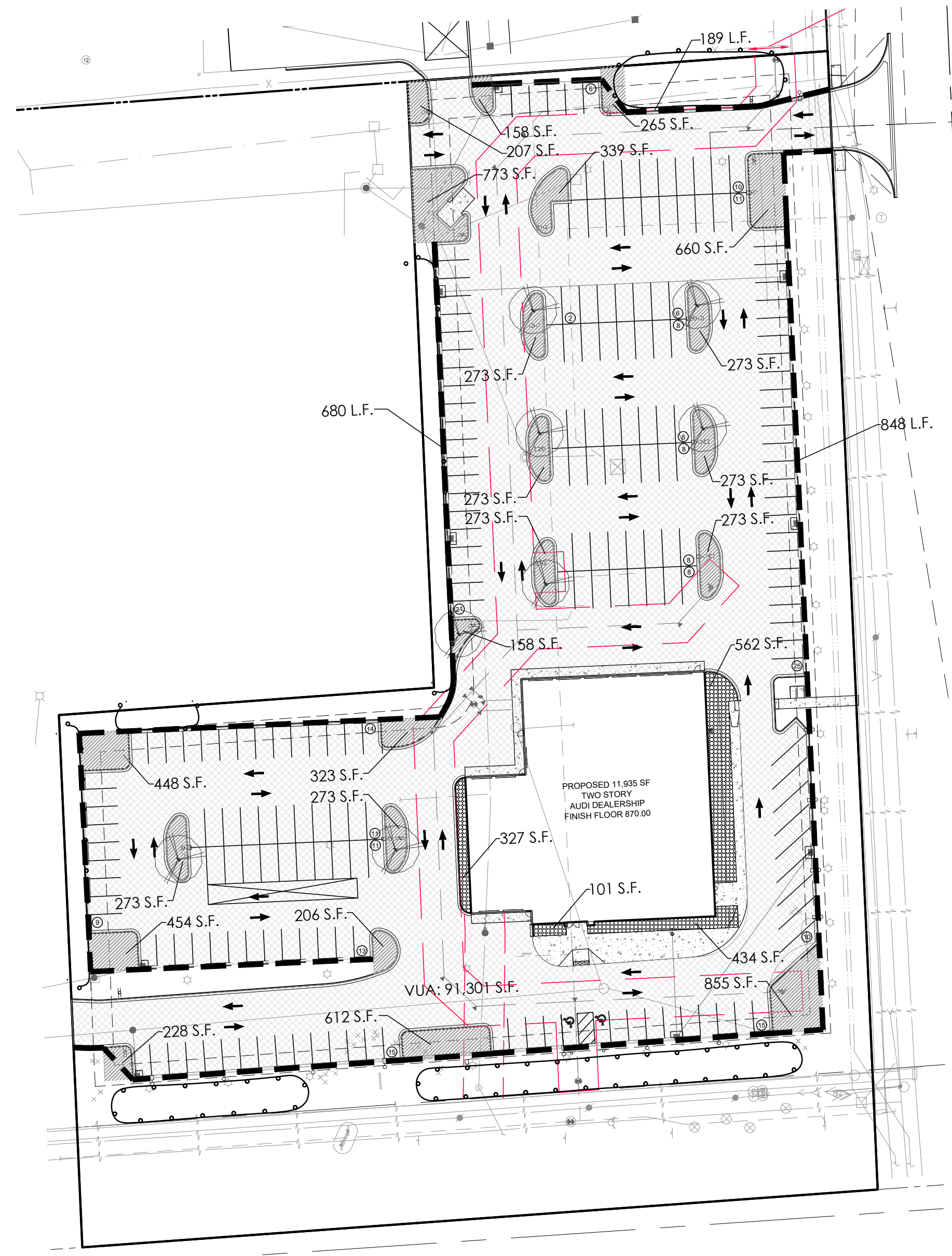
DRAWN BY:  
G. Ostrowski  
DESIGNED BY:  
G. Ostrowski  
APPROVED BY:  
G. Ostrowski  
DATE:  
02-22-2022

SCALE: 1" = 30'

NFE JOB NO. SHEET NO.  
1921-03 L1

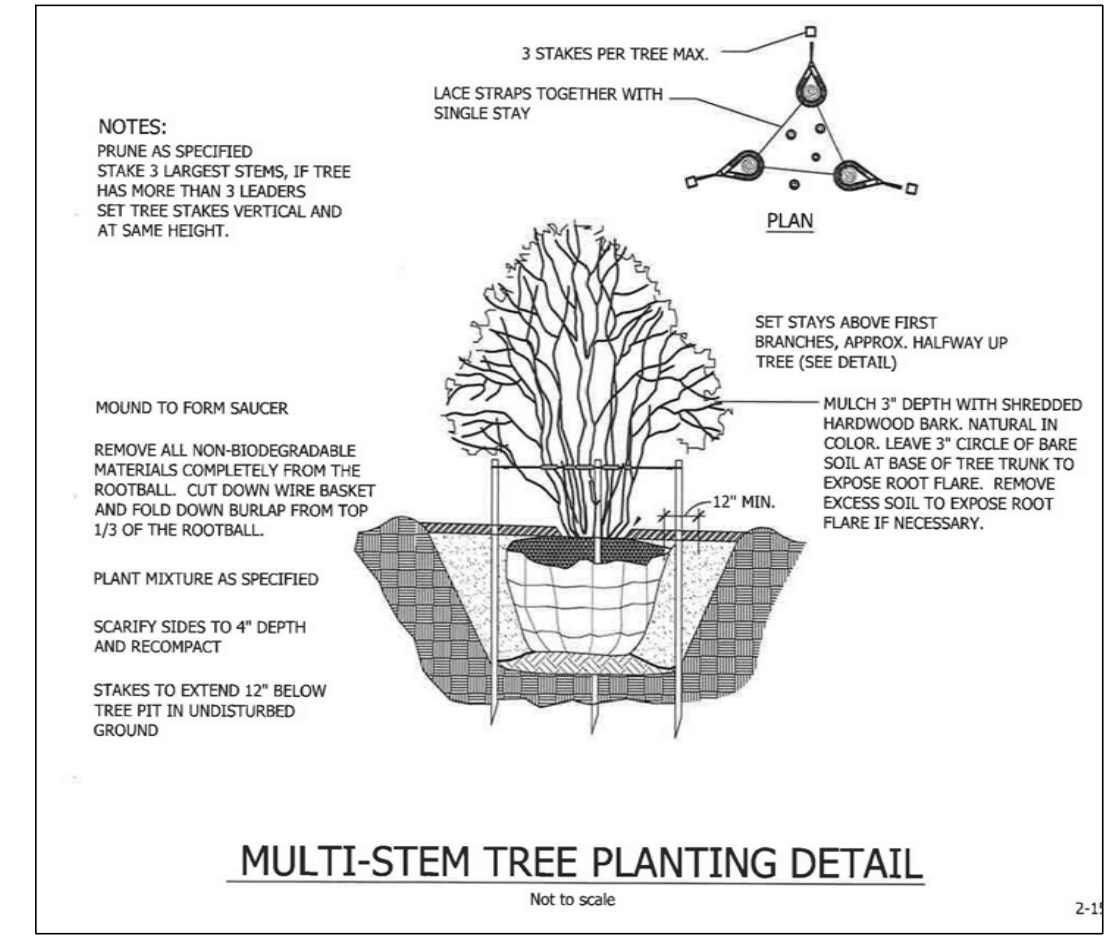






BASIS OF CALCULATIONS DIAGRAM

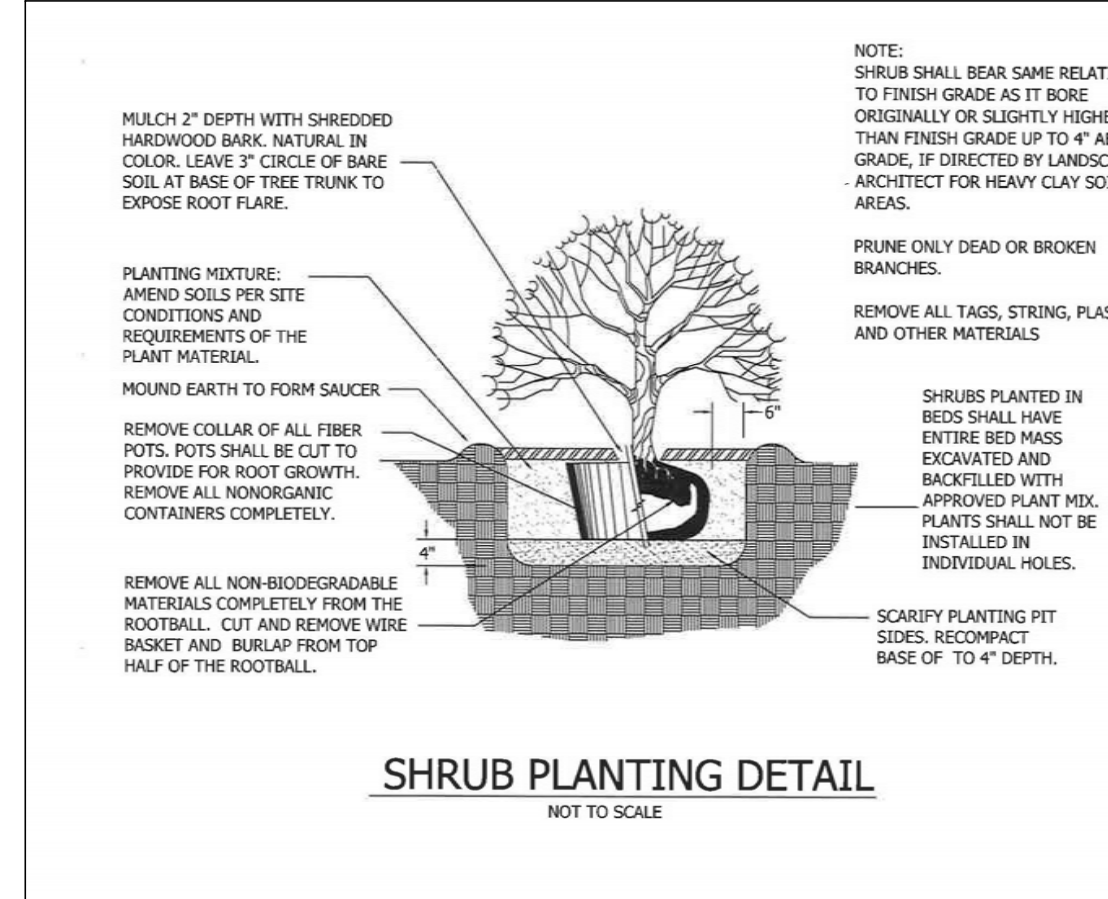
1" = 30'



MULTI-STEM TREE PLANTING DETAIL

Not to scale

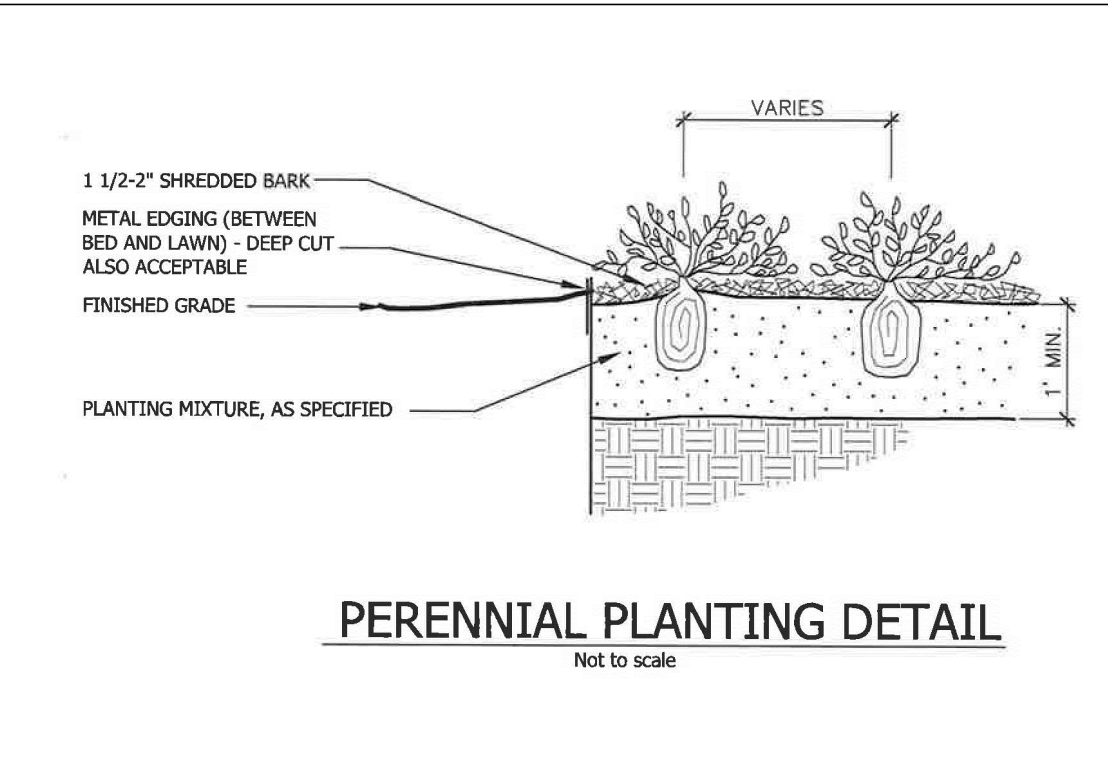
2-11



SHRUB PLANTING DETAIL

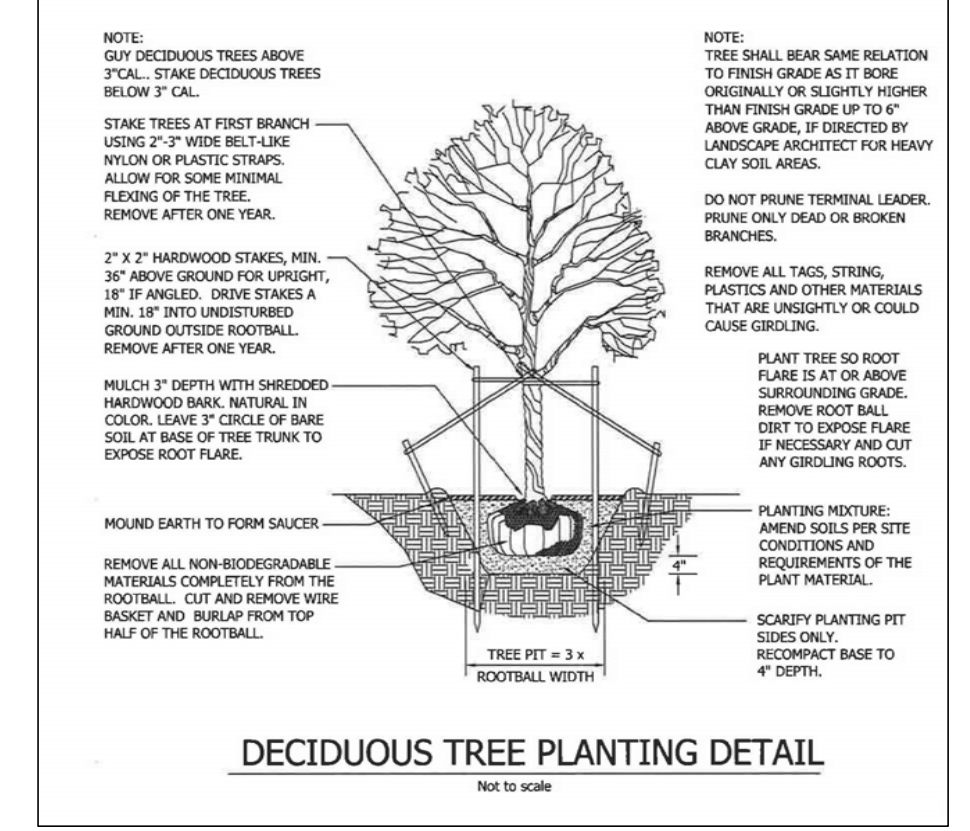
NOT TO SCALE

2-15-2



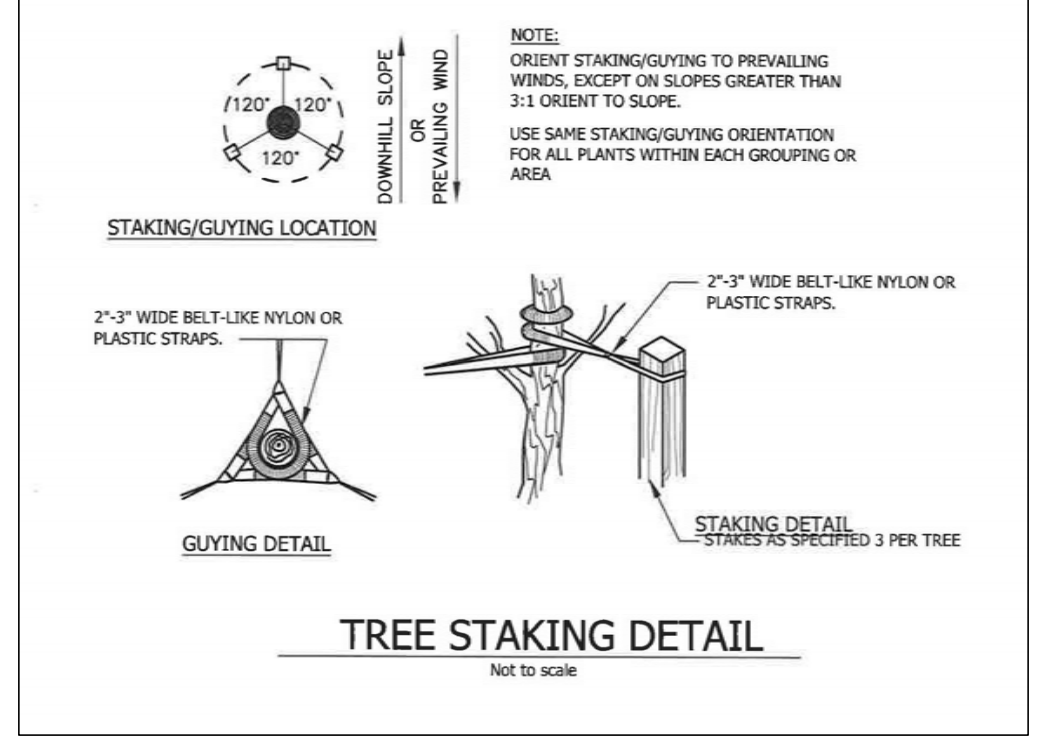
PERENNIAL PLANTING DETAIL

Not to scale



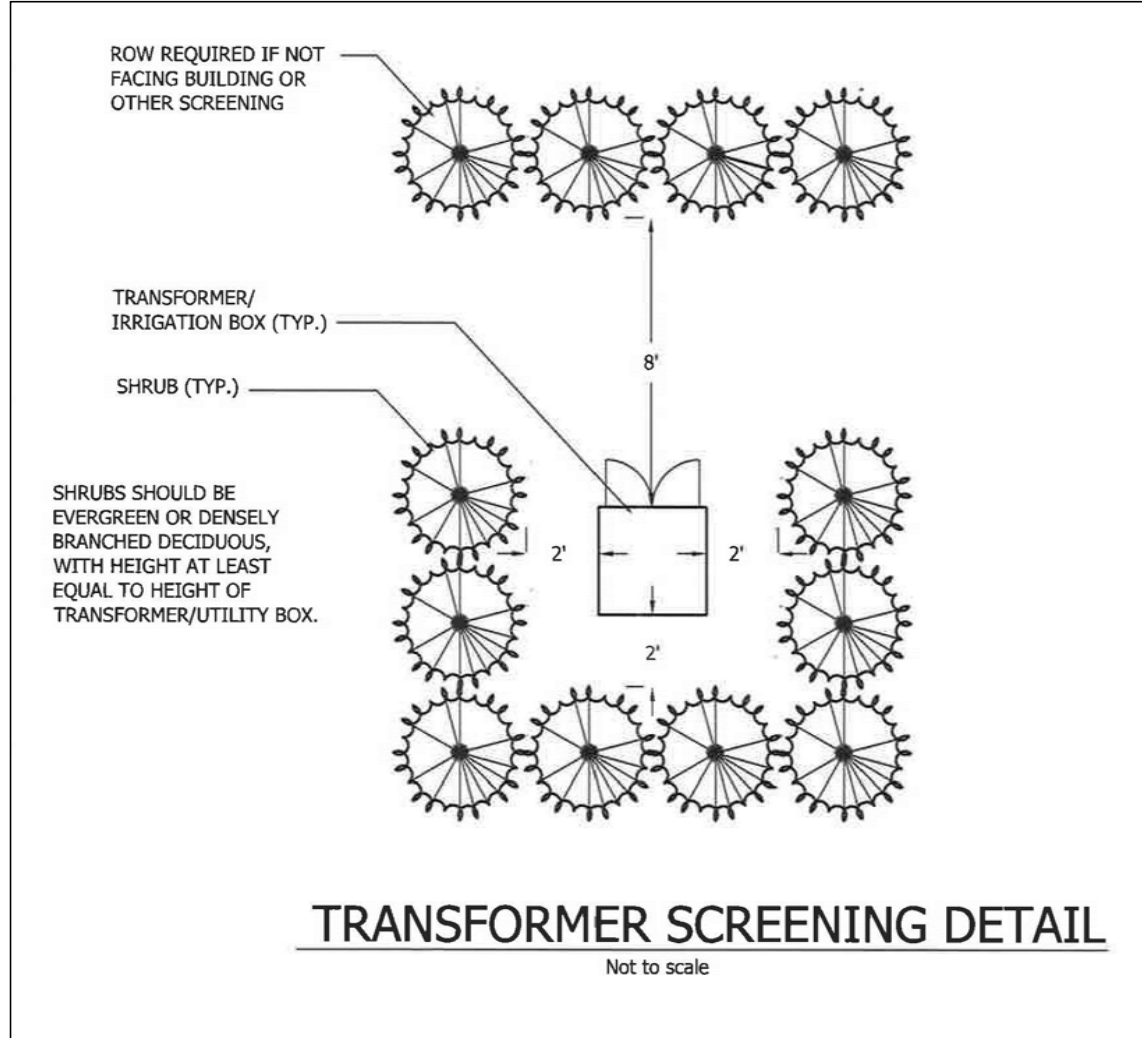
DECIDUOUS TREE PLANTING DETAIL

Not to scale



TREE STAKING DETAIL

Not to scale



TRANSFORMER SCREENING DETAIL

Not to scale

SEAL



PROJECT  
Lithia Motors, Inc.  
- Audi of Novi

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

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

PROJECT LOCATION  
Part of the Southeast 1/4 of  
Section 24, Town 1 North,  
Range 8 East, City of Novi,  
Oakland County, Michigan

SHEET  
Landscape Notes  
and Details



REVISIONS  
03/09/22 ISSUED FOR SITE PLAN REVIEW

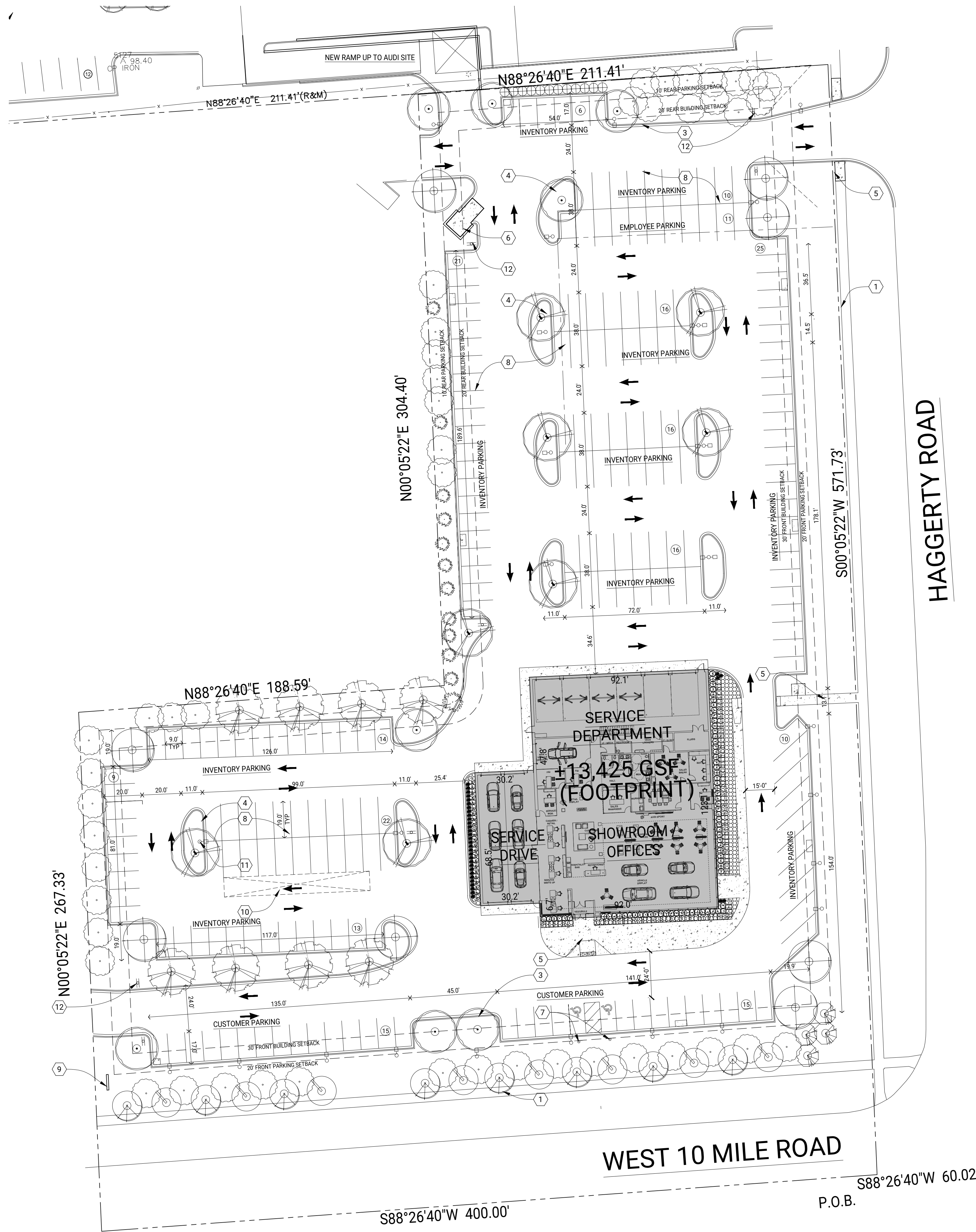
DRAWN BY:  
G. Ostrowski  
DESIGNED BY:  
G. Ostrowski  
APPROVED BY:  
G. Ostrowski  
DATE:  
02-22-2022

SCALE: 1" = 30'

NFE JOB NO. SHEET NO.  
1921-03 L3

**SITE PLAN KEY NOTES:  
(TYPICAL THIS SHEET ONLY)**

- ① EXISTING CONCRETE WALK TO REMAIN
- ② EXISTING POLE WITH NEW LIGHT FIXTURE (LP[E]); SEE PHOTOMETRIC SITE PLAN
- ③ PROPOSED 6" CONC. CURB & GUTTER - SEE CIVIL
- ④ PROPOSED LANDSCAPE ISLAND w/ 6" CONC. CURB & GUTTER - SEE CIVIL
- ⑤ PROPOSED CONCRETE WALK
- ⑥ PROPOSED DUMPSTER ENCLOSURE - SEE CIVIL DETAILS
- ⑦ PROPOSED 'PHYSICALLY HANDICAPPED' SIGN & POLE AT BARRIER FREE PARKING SPACE - SEE DETAIL
- ⑧ PROPOSED PAINTED OR THERMOPLASTIC STRIPING (WHITE)
- ⑨ PROPOSED 'AUDI' GROUND SIGN AND BASE; SEE DETAIL AND COORDINATE FINAL PACKAGE WITH SIGNAGE VENDOR
- ⑩ PROPOSED LOADING SPOT; SEE CIVIL
- ⑪ BUILDING (WA) / POLE MOUNTED (LP) LIGHT FIXTURE, SEE PHOTOMETRIC SITE PLAN
- ⑫ WAYFINDING SIGNAGE



**LEGAL DESCRIPTION:**

A PART OF THE SOUTHEAST ¼ 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 S. 88°40'57" W., (RECORDED AS S. 88°26'40" W.) 60.02 FEET TO A POINT ON THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING; THENCE S. 88°26'40" W., 800.00 FEET; THENCE N. 00°03'40" E., 190.00 FEET; THENCE N. 49°33'57" E., 150.25 FEET; THENCE S. 89°56'20" E., 685.42 FEET TO THE WESTERLY LINE OF SAID HAGGERTY ROAD, THENCE S. 00°03'40" W., 265.00 FEET ALONG THE WESTERLY LINE OF SAID HAGGERTY ROAD TO THE POINT OF BEGINNING.

DO NOT SCALE DRAWINGS

**ISSUED**

03.09.2022	SPA
04.22.2022	SPA - REVISED
05.02.2022	ZBA

**DRAWN** SHF

**CHECKED** SMB

**SEAL**

THIS DOCUMENT AND THE INFORMATION CONTAINED THEREIN IS THE SOLE POSSESSION OF STUDIO DETROIT AND SHALL NOT BE ALTERED OR MODIFIED WITHOUT THE EXPRESS WRITTEN PERMISSION OF STUDIO DETROIT. ANY MODIFICATION OR ALTERATION THEREOF SHALL INDEMNIFY AND HOLD HARMLESS STUDIO DETROIT OF ALL EXPENSES, CLAIMS AND/OR LIABILITY RESULTING FROM SUCH MODIFICATIONS OR ALTERATIONS.  
©2022 STUDIO DETROIT LLC

**CLIENT**

**LITHIA MOTORS**  
150 NORTH BARTLETT  
MEDFORD, OREGON

**PROJECT 2038**

**AUDI OF NOVI  
PROPOSED NEW  
FACILITY**  
2429S HAGGERTY ROAD  
NOVI, MI 48375

<b>SITE DATA</b>	
CITY OF NOVI, MI	
SITE AREA	
SITE AREA TOTAL	±3.93 ACRES
<b>ZONING</b>	
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
<b>BUILDING AREAS</b>	
AUDI (PROPOSED)	±13,423 SF
<b>VEHICLE DEALERSHIP, SALES AND SERVICE</b>	
REQUIRED PARKING = 1 SPACE FOR 200 SF OF FLOOR SPACE OF SALES ROOM + 1 SPACES FOR EACH SERVICE BAY	
TOTAL REQUIRED =	6,650 SF / 200 = 34 SPACES
6 AUTO SERVICE BAYS =	6 SPACES
<b>PARKING PROVIDED</b>	
EMPLOYEE/ CUSTOMER PARKING=	41 SPACES (INCLUDING TWO BARRIER FREE SPACES)
INVENTORY PARKING=	178 SPACES

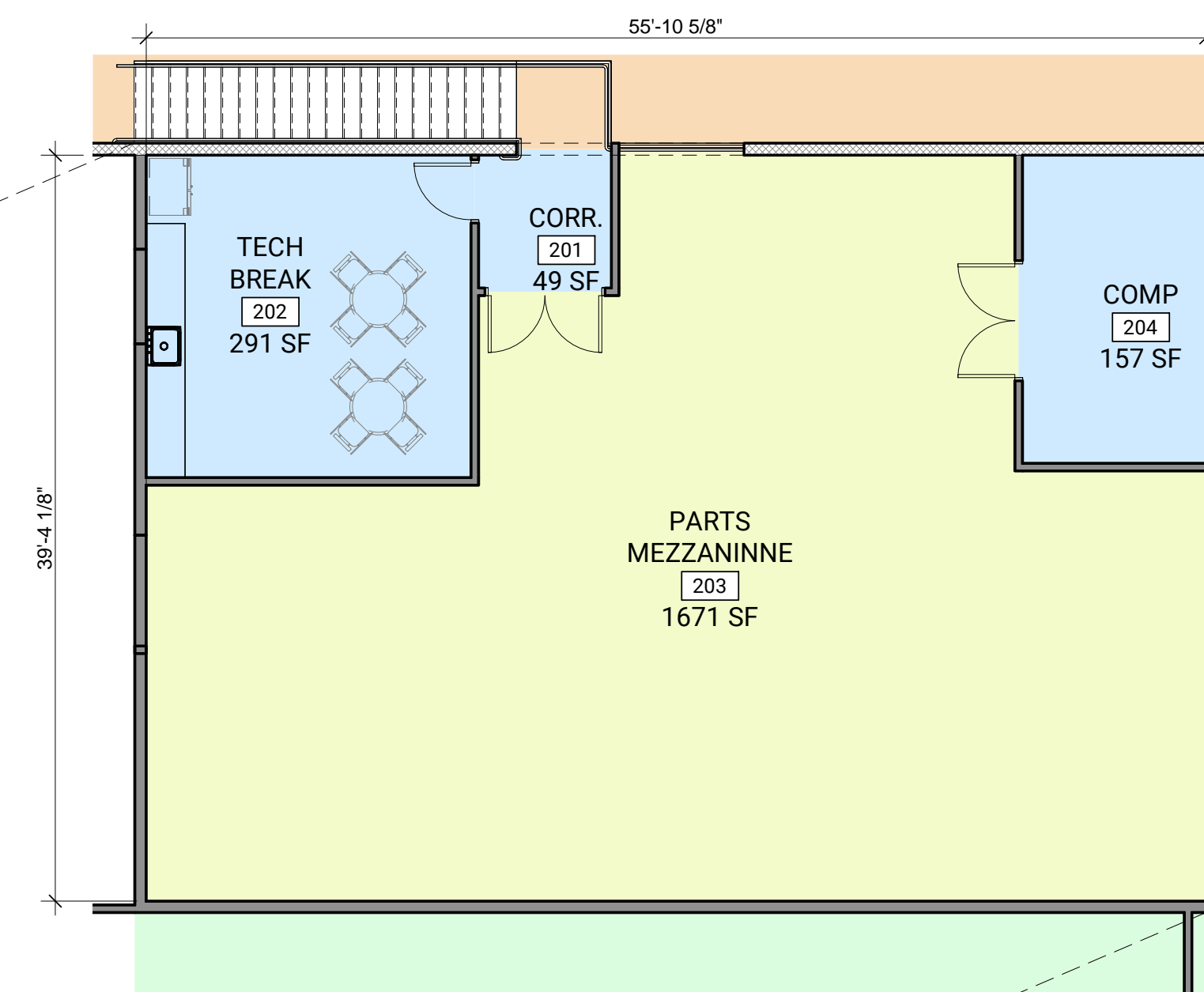




**FIRST FLOOR PLAN - COMPOSITE**  
1/8" = 1'-0"

**DEALERSHIP ZONES**

- BACK OF HOUSE
- PARTS
- SALES
- SERVICE
- SERVICE RECEPTION



**SECOND FLOOR PLAN - COMPOSITE**  
1/8" = 1'-0"

DEPARTMENT AREA BY FLOOR		
DEPARTMENT	LEVEL	AREA (NSF)
BACK OF HOUSE	FIRST FLOOR	964 SF
BACK OF HOUSE	SECOND FLOOR	497 SF
PARTS	SECOND FLOOR	1,671 SF
SALES	FIRST FLOOR	5,848 SF
SERVICE	FIRST FLOOR	3,026 SF
SERVICE RECEPTION	FIRST FLOOR	2,762 SF
<b>TOTAL (NSF)</b>		<b>14,769 SF</b>

GROSS BUILDING AREA	
BUILDING FOOTPRINT	13,423 SF
SECOND FLOOR	2,343 SF
<b>TOTAL BUILDING AREA (GSF)</b>	<b>15,767 SF</b>

DO NOT SCALE DRAWINGS

ISSUED	
03.09.22	SPA
04.15.22	30% BRAND REVIEW
05.02.22	ZBA

DRAWN ATC  
CHECKED SHF

SEAL



THIS DOCUMENT AND THE INFORMATION CONTAINED THEREIN IS THE SOLE POSSESSION OF STUDIO DETROIT AND SHALL NOT BE ALTERED OR MODIFIED WITHOUT THE EXPRESS WRITTEN PERMISSION OF STUDIO DETROIT. ANY MODIFICATION OR ALTERATION THEREOF SHALL INDEMNIFY AND HOLD HARMLESS STUDIO DETROIT OF ALL EXPENSES, CLAIMS AND/OR LIABILITY RESULTING FROM SUCH MODIFICATIONS OR ALTERATIONS.

©2022 STUDIO DETROIT LLC

CLIENT

**LITHIA MOTORS**

PROJECT 2038

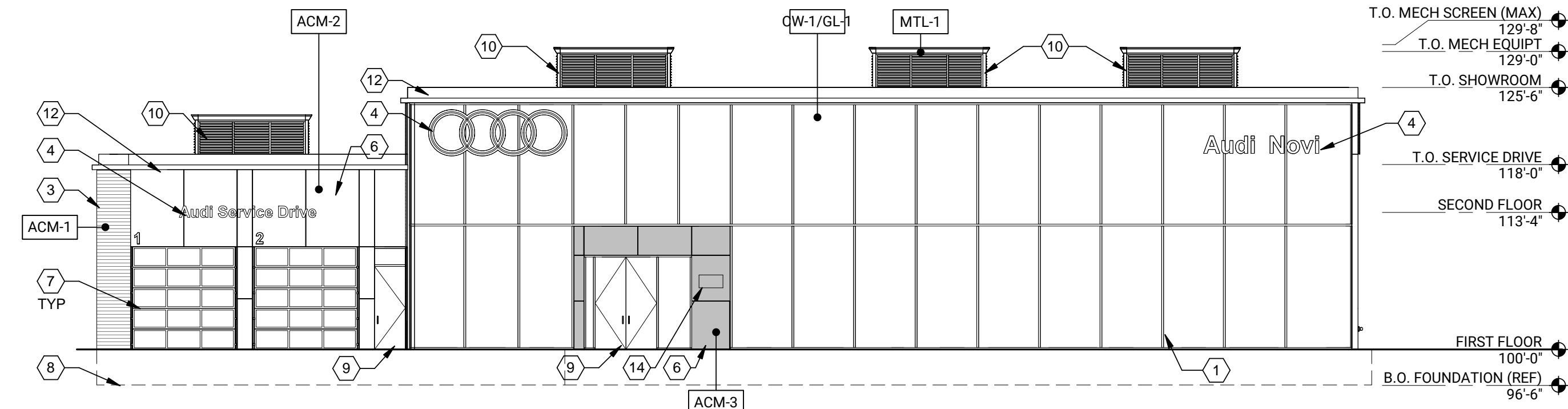
**AUDI OF NOVI  
PROPOSED NEW  
FACILITY**  
24295 HAGGERTY RD  
NOVI, MI 48375

COMPOSITE PLAN

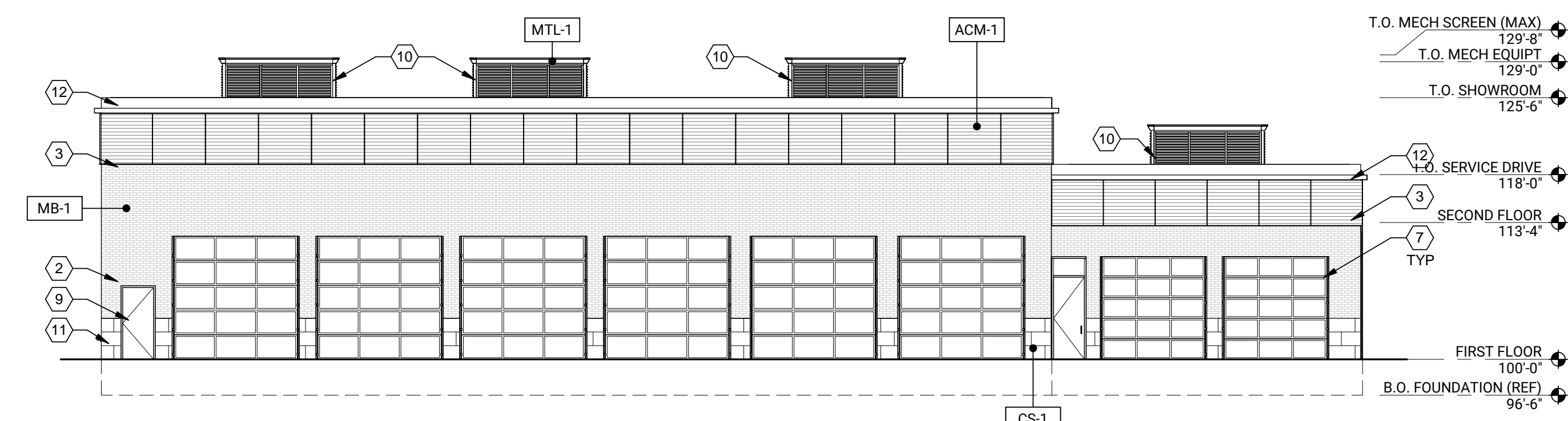
**TS1.4**

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

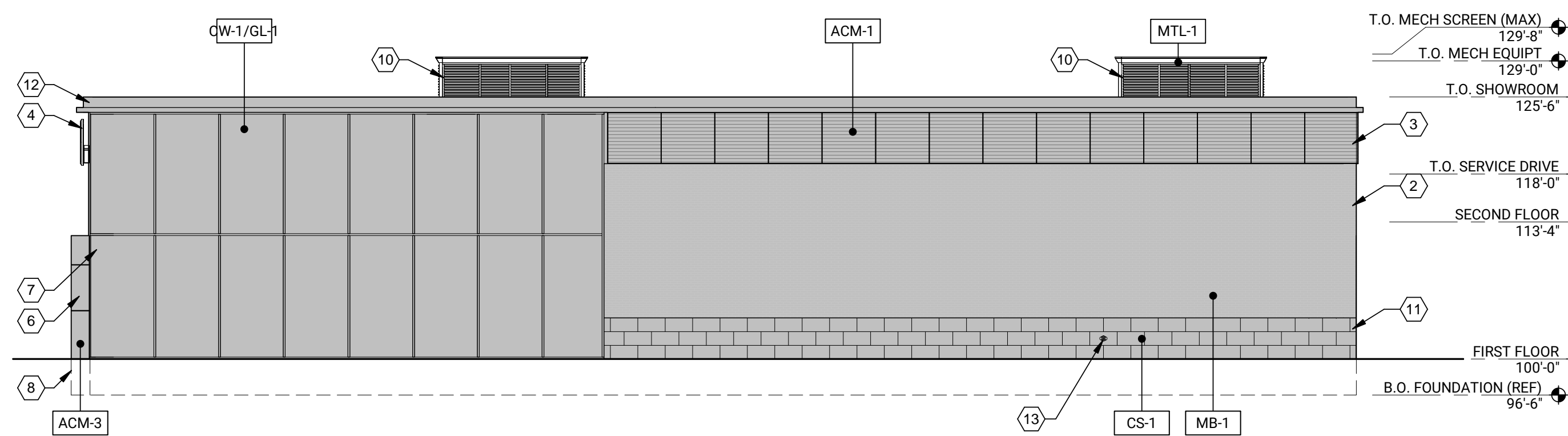
- 1 GLASS AND ALUMINUM STOREFRONT/ CURTAINWALL
- 2 BRICK VENEER
- 3 PERFORATED METAL PANEL OVER ALUMINUM COMPOSITE PANEL SYSTEM (ACM)
- 4 BUILDING MOUNTED SIGNAGE
- 5 6" CONC. FILLED STL PIPE BOLLARD w/ PLASTIC COVER
- 6 ALUMINUM COMPOSITE PANEL SYSTEM (ACM)
- 7 GLASS & ALUMINUM OVERHEAD DOOR
- 8 INDICATES NEW REINF. CONC. FOOTING/ FOUNDATION WALL
- 9 DOOR & FRAME
- 10 FLUSH METAL PANEL MECHANICAL SCREEN
- 11 CAST STONE
- 12 FORMED ACM COPING
- 13 FIRE DEPARTMENT CONNECTION
- 14 ENTRY ELEMENT SIGNAGE, SEE SP1.2



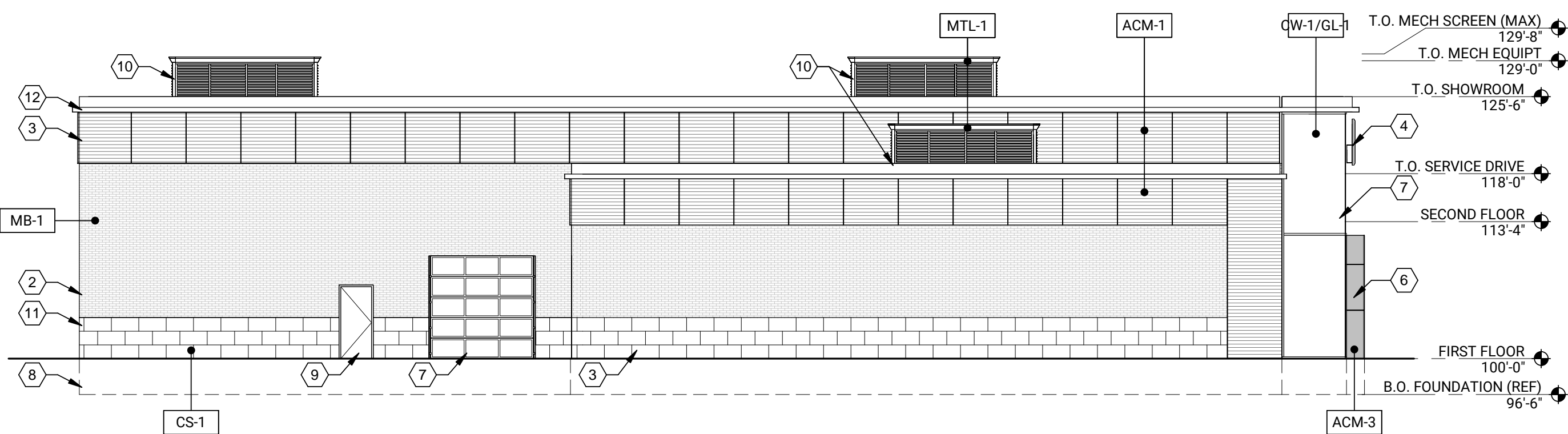
**4 SOUTH ELEVATION**  
SCALE: 3/32" = 1'-0"



**3 NORTH ELEVATION**  
SCALE: 3/32" = 1'-0"



**2 EAST ELEVATION**  
SCALE: 3/32" = 1'-0"



**1 WEST ELEVATION**  
SCALE: 3/32" = 1'-0"

EXTERIOR MATERIALS			
PATTERN	TAG	MATERIAL	FINISH
	MB-1	BRICK VENEER	CLAY BRICK MASONRY, 4"x12" (JUMBO OR UTILITY SIZED) ON WALL SYSTEM AS SPECIFIED; COLOR MERIDIAN, 'SLATE'
	CS-1	CAST STONE	16"x24" CAST STONE PANEL
	ACM-1	ALUMINUM COMPOSITE PANEL SYSTEM (ACM)	PERFORATED METAL PANEL OVER ACM RAINSCREEN w/ FINISHED REVEALS
	ACM-2	ALUMINUM COMPOSITE PANEL SYSTEM (ACM)	ACM RAINSCREEN w/ FINISHED REVEALS
	ACM-3	ALUMINUM COMPOSITE PANEL SYSTEM (ACM)	ACM RAINSCREEN w/ FINISHED REVEALS
	CW-1/GL-1	CURTAINWALL / EXTERIOR GLAZING	STOREFRONT/ CURTAINWALL FRAMING AS SPECIFIED; SOLARBAN 70XL CLEAR GLASS
	MTL-1	MECHANICAL SCREEN	LOUVERED MECHANICAL SCREEN

SOUTH FACADE EXT. MAT. CALCS - TOTAL AREA 690 S.F.			
MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	0 S.F.	0%
CAST STONE	25% MAX	0 S.F.	0%
PERFORATED METAL PANEL ON ACM	50% MAX	58 S.F.	8.4%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)		506 S.F.	73.3%
MECHANICAL SCREEN		126 S.F.	18.3%

NORTH FACADE EXT. MAT. CALCS - TOTAL AREA 1,902 S.F.			
MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	909 S.F.	47.8%
CAST STONE	25% MAX	83 S.F.	4.4%
PERFORATED METAL PANEL ON ACM	50% MAX	600 S.F.	31.5%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)		184 S.F.	9.7%
MECHANICAL SCREEN		126 S.F.	6.6%

EAST FACADE EXT. MAT. CALCS - TOTAL AREA 2,021 S.F.			
MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	1,094 S.F.	54.2%
CAST STONE	25% MAX	292 S.F.	14.4%
PERFORATED METAL PANEL ON ACM	50% MAX	365 S.F.	18.1%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)		207 S.F.	10.2%
MECHANICAL SCREEN		63 S.F.	3.1%

WEST FACADE EXT. MAT. CALCS - TOTAL AREA 2,924 S.F.			
MATERIAL	% MAX	MATERIAL AREA	% PROPOSED
BRICK VENEER	100% MAX / 30% MIN	1,198 S.F.	41.0%
CAST STONE	25% MAX	392 S.F.	13.4%
PERFORATED METAL PANEL ON ACM	50% MAX	928 S.F.	31.7%
ALUMINUM COMPOSITE PANEL SYSTEM (ACM)		311 S.F.	10.6%
MECHANICAL SCREEN		95 S.F.	3.3%

DO NOT SCALE DRAWINGS

**ISSUED**

03.09.21	SPA
04.15.22	30% BRAND REVIEW
05.02.22	ZBA

**DRAWN** SHF  
**CHECKED** SMB

**SEAL**

**NOT FOR CONSTRUCTION**

THIS DOCUMENT AND THE INFORMATION CONTAINED THEREIN IS THE SOLE POSSESSION OF STUDIO DETROIT AND SHALL NOT BE ALTERED OR MODIFIED WITHOUT THE EXPRESS WRITTEN PERMISSION OF STUDIO DETROIT. ANY MODIFICATION OR ALTERATION THEREOF SHALL INDEMNIFY AND HOLD HARMLESS STUDIO DETROIT OF ALL EXPENSES, CLAIMS AND/OR LIABILITY RESULTING FROM SUCH MODIFICATIONS OR ALTERATIONS.

©2022 STUDIO DETROIT LLC

**CLIENT**

**LITHIA MOTORS**

**PROJECT 2038**

**AUDI OF NOVI**  
**PROPOSED NEW FACILITY**  
24295 HAGGERTY RD  
NOVI, MI 48375

### D-Series Size 1 LED Wall Luminaire

**Specifications Luminaire**  
 Width: 13.34" Weight: 12 lbs  
 Depth: 10" Height: 6.38"

**Back Box (BBW, ELCW)**  
 Width: 13.34" Weight: 5 lbs  
 Depth: 6" Height: 10 lbs

**Introduction**  
 The D-Series LED 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.

#### Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBT2D

Code	LED	Color	Temp	Beam	Mount	Notes
DSXW1	LED	40K	1000	T3M	MVOLT	DDBT2D

**Accessories**

- SP Single (see 170, 277 or 347V)
- SP2 Double (see 276, 241 or 400V)
- SP3 Floor (see 240V)
- SP4 Square (see 240V)

**LITHONIA LIGHTING**  
 One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.379.8041  
 © 2013-2018 Acuity Brands Lighting, Inc. All rights reserved.

### D-Series Size 2 LED Area Luminaire

**Specifications**  
 Length: 18.5"  
 Width: 15"  
 Height 1: 2.14"  
 Height 2: 1.91"  
 Weight: 30 lbs

**Introduction**  
 The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

#### Ordering Information

EXAMPLE: DSX2 LED P7 40K T3M MVOLT SPA NLTAR2 PIRHN DDBX2

Code	LED	Color	Temp	Beam	Mount	Notes
DSX2	LED	40K	1000	T3M	MVOLT	DDBX2

**Accessories**

- SP Single (see 170, 277 or 347V)
- SP2 Double (see 276, 241 or 400V)
- SP3 Floor (see 240V)
- SP4 Square (see 240V)

**LITHONIA LIGHTING**  
 One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-755-SEV (3736)  
 © 2013-2020 Acuity Brands Lighting, Inc. All rights reserved.

#### 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.

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

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

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

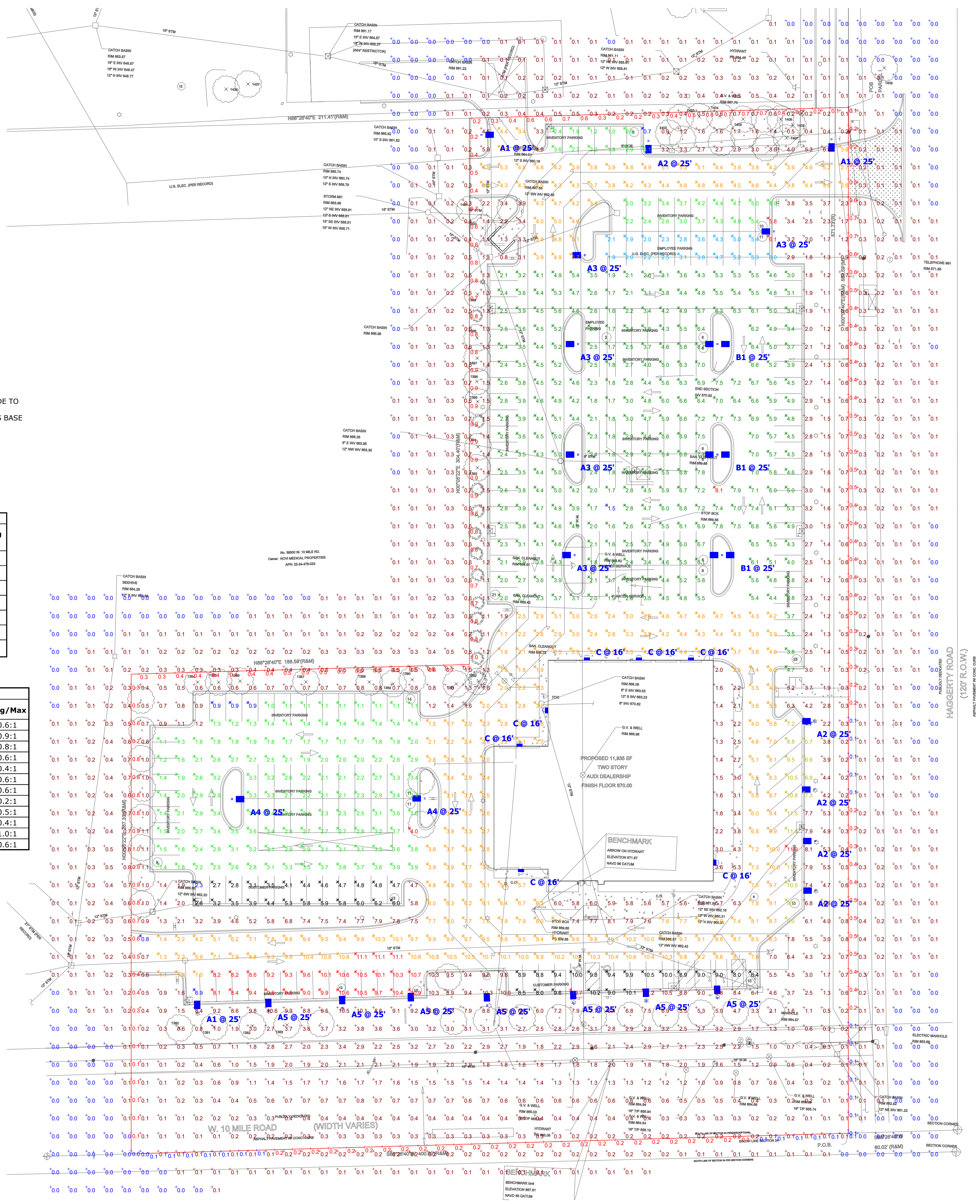
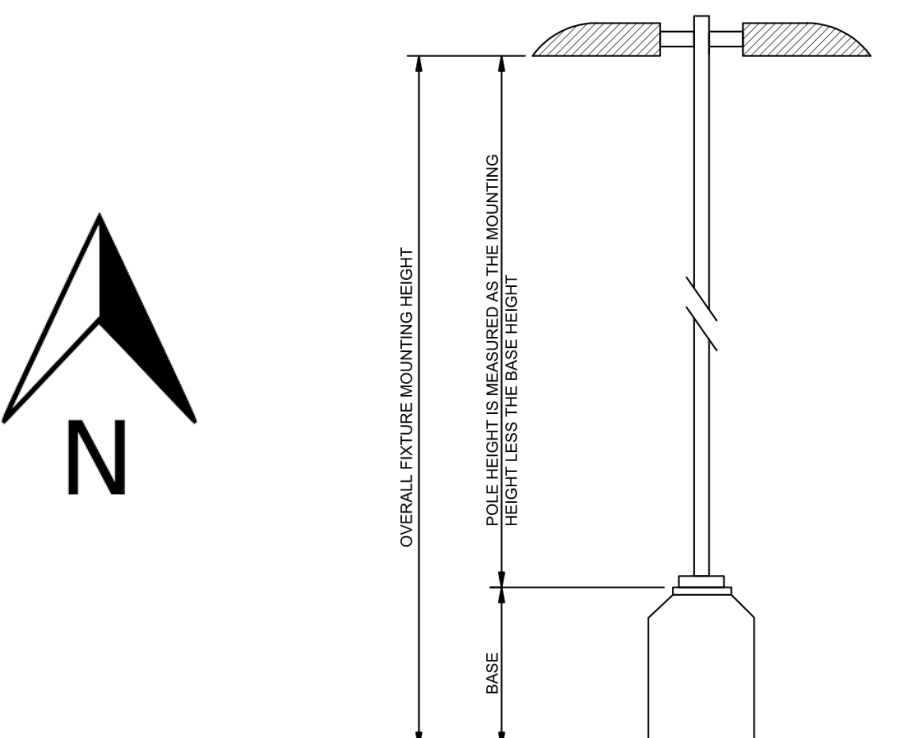
**Mounting Height Note**  
 MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

#### Schedule

Symbol	Label	Quantity	Manufacturer	Description	Lamp	Mounting Height
A1	A1	3	Lithonia Lighting	DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
A2	A2	5	Lithonia Lighting	DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
A3	A3	5	Lithonia Lighting	DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
A4	A4	2	Lithonia Lighting	DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
A5	A5	7	Lithonia Lighting	DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
B1	B1	3	Lithonia Lighting	TWIN DSX2 LED AREA LIGHT, 4000K	LED	25'-0"
C	C	7	Lithonia Lighting	DSXW1 LED BUILDING MOUNTED LIGHT, 4000K	LED	16'-0"

#### Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
CUSTOMER PARKING AREA	X	6.6 fc	10.7 fc	2.3 fc	4.7:1	2.9:1	0.6:1
DISPLAY AREA #1	X	9.5 fc	10.9 fc	6.9 fc	1.6:1	1.4:1	0.9:1
DISPLAY AREA #2	X	9.1 fc	11.9 fc	4.7 fc	2.5:1	1.9:1	0.8:1
EMPLOYEE PARKING	X	3.4 fc	6.1 fc	1.7 fc	3.6:1	2.0:1	0.6:1
PROPERTY LINE - HAGGERTY ROAD	+	0.3 fc	0.7 fc	0.1 fc	7.0:1	3.0:1	0.4:1
PROPERTY LINE - NON R.O.W. AREA	+	0.6 fc	1.0 fc	0.0 fc	N/A	N/A	0.6:1
NORTH INVENTORY LOTS	X	3.2 fc	5.8 fc	0.7 fc	8.3:1	4.6:1	0.6:1
OVERALL	+	2.3 fc	11.9 fc	0.0 fc	N/A	N/A	0.2:1
REAR STORAGE LOT	X	4.4 fc	8.1 fc	1.5 fc	5.4:1	2.9:1	0.5:1
SITE CIRCULATION	X	4.7 fc	11.1 fc	0.8 fc	13.9:1	5.9:1	0.4:1
PROPERTY LINE - WEST 10 MILE ROAD	+	0.2 fc	0.2 fc	0.1 fc	2.0:1	2.0:1	1.0:1
WEST INVENTORY LOT	X	2.4 fc	4.0 fc	0.9 fc	4.4:1	2.7:1	0.6:1



**Plan View**  
 Scale - 1" = 30ft

**GBA**

LITHIA - AUDI NOVIT  
 PHOTOMETRIC SITE PLAN  
 PREPARED FOR: Novak & Fraus Engineers  
 GASSER BUSH ASSOCIATES  
 WWW.GASSERBUSH.COM

Designer: TV/KB  
 Date: 3/1/2022  
 rev. 3/8/2022  
 rev. 3/9/2022  
 Scale: Not to Scale  
 Drawing No.: #22-72730-V3  
 1 of 1