



## 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:** October 10, 2023

**REGARDING:** Parcel # 50-22-22-276-017(PZ23-0043)

**BY:** Alan Hall, Deputy Director Community Development

### I. GENERAL INFORMATION:

#### **Applicant**

Novi Pet Resort

#### **Variance Type**

Dimensional Variance

#### **Property Characteristics**

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

Location: south of Grand River Avenue, west of Novi Road

Parcel #: 50-22-22-276-017

#### **Request**

The applicant is requesting variances from the City of Novi Zoning Ordinance Section 3.1.18.D for a reduction of exterior side yard setback to 10 ft. (ft. required, variance of 30 ft.); Section 4.46.4.B & 4.46.4.D to allow outdoor facilities to be located in the exterior side yard within the required setback; Section 4.19.2.F.i to allow refuse bin to be located in the exterior side yard; and Section 5.4 to waive the requirement for designated loading space. This property is zoned Light Industrial (I-1).

### II. STAFF COMMENTS:

The proposed development parcel was created in part by the road reconfiguration for the construction of the Novi Road bridge over the rail tracks. It is unique in that it currently has street frontage on all (4) sides.

**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. **PZ23-0043**, 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. **PZ23-0043**, 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.

Alan Hall – Deputy Director Community Development - City of Novi



Community Development Department

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RECEIVED

SEP 01 2023

CITY OF NOVI
COMMUNITY DEVELOPMENT

ZONING BOARD OF APPEALS
APPLICATION

APPLICATION MUST BE FILLED OUT COMPLETELY

I. PROPERTY INFORMATION (Address of subject ZBA Case)
PROJECT NAME / SUBDIVISION: Novi Pet Resort - Proposed Pet Boarding Facility
ADDRESS: No address listed - Corner of Novi Road & Gen Mar
LOT/SUITE/SPACE #:
SIDWELL #: 50-22-22 -276 -017
CROSS ROADS OF PROPERTY: Gen Mar & Novi 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

Application Fee: 300.00
Meeting Date: 10-10-23
ZBA Case #: PZ 23-0043

II. APPLICANT INFORMATION
A. APPLICANT
NAME: John A. Vitale, AIA
ORGANIZATION/COMPANY: Stucky Vitale Architects
ADDRESS: 27172 Woodward Ave.
CITY: Royal Oak
STATE: MI
ZIP CODE: 48067
EMAIL ADDRESS: mblanek@stuckyvitale.com
CELL PHONE NO.
TELEPHONE NO.: 248.546.6700
FAX NO.

B. PROPERTY OWNER [ ] CHECK HERE IF APPLICANT IS ALSO THE PROPERTY OWNER
Identify the person or organization that owns the subject property:
NAME: Kevin Baird
ORGANIZATION/COMPANY: Novi Gen Mar LLC c/o Registered Agent Kevin Baird
ADDRESS: 720 Kimberly Drive
CITY: Troy
STATE: MI
ZIP CODE: 48098
EMAIL ADDRESS: KBaird@realestateone.com
CELL PHONE NO.
TELEPHONE NO.: 248.709.2792
FAX NO.

III. ZONING INFORMATION
A. ZONING DISTRICT
[ ] R-A [ ] R-1 [ ] R-2 [ ] R-3 [ ] R-4 [ ] RM-1 [ ] RM-2 [ ] MH
[x] I-1 [ ] I-2 [ ] RC [ ] TC [ ] TC-1 [ ] OTHER
B. VARIANCE REQUESTED
INDICATE ORDINANCE SECTION (S) AND VARIANCE REQUESTED:
1. Section 3.1.18.D & 3.6.2.C Variance requested MINIMUM BUILDING SETBACK / LANDSCAPE BUFFER & MODIFICATION OF SETBACKS
2. Section 4.46.4 Variance requested OUTDOOR FACILITIES LOCATED WITHIN SIDE STREET YARD & ENCRoACHMENT INTO BUILDING SETBACKS
3. Section 4.19.2.F Variance requested DUMPSTER LOCATED IN SIDE STREET YARD (NO REAR YARD AVAILABLE)
4. Section 5.4.1 Variance requested DESIGNATED LOADING ZONE NOT PROVIDED (NOT NECESSARY FOR USE)

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



# ZONING BOARD OF APPEALS APPLICATION

## V. VARIANCE

### A. VARIANCE (S) REQUESTED

DIMENSIONAL    USE    SIGN

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

### B. SIGN CASES (ONLY)

Your signature on this application indicates that you agree to install a **Mock-Up Sign** ten (10) days before the scheduled ZBA meeting. Failure to install a mock-up sign may result in your case not being heard by the Board, postponed to the next 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

*John W. ...*  
Applicant Signature

8-31-23  
Date

### B. PROPERTY OWNER

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

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

REFER TO INCLUDED PURCHASE AGREEMENT  
Property Owner Signature \_\_\_\_\_ 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 \_\_\_\_\_



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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.

**Describe below:**

Property has (4) four front yards due to 4 existing roads and (2) Oakland County Easements. One runs North and South and the other runs East and West.

OR

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

The East property line fronts Novi Rd where a steep grade change impacts the property making a portion of this side not feasible to build on.

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:**

As this property has roads on 4 sides, there is no immediate impact to adjacent properties.

## **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).

As noted, property has (4) front yards which makes the need for dimensional variances the only option to be able to develop the property.

## **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.

Requiring conformance with (4) front setbacks, extreme grade along Novi Rd and county easements will make the property unbuildable.

## **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.

By allowance of establishing a one front yard for the property, this allows the other 3 sides to conform as much as possible to the remainder of the ordinances for set backs. Refer to the attached letter description for the actual variances being requested.

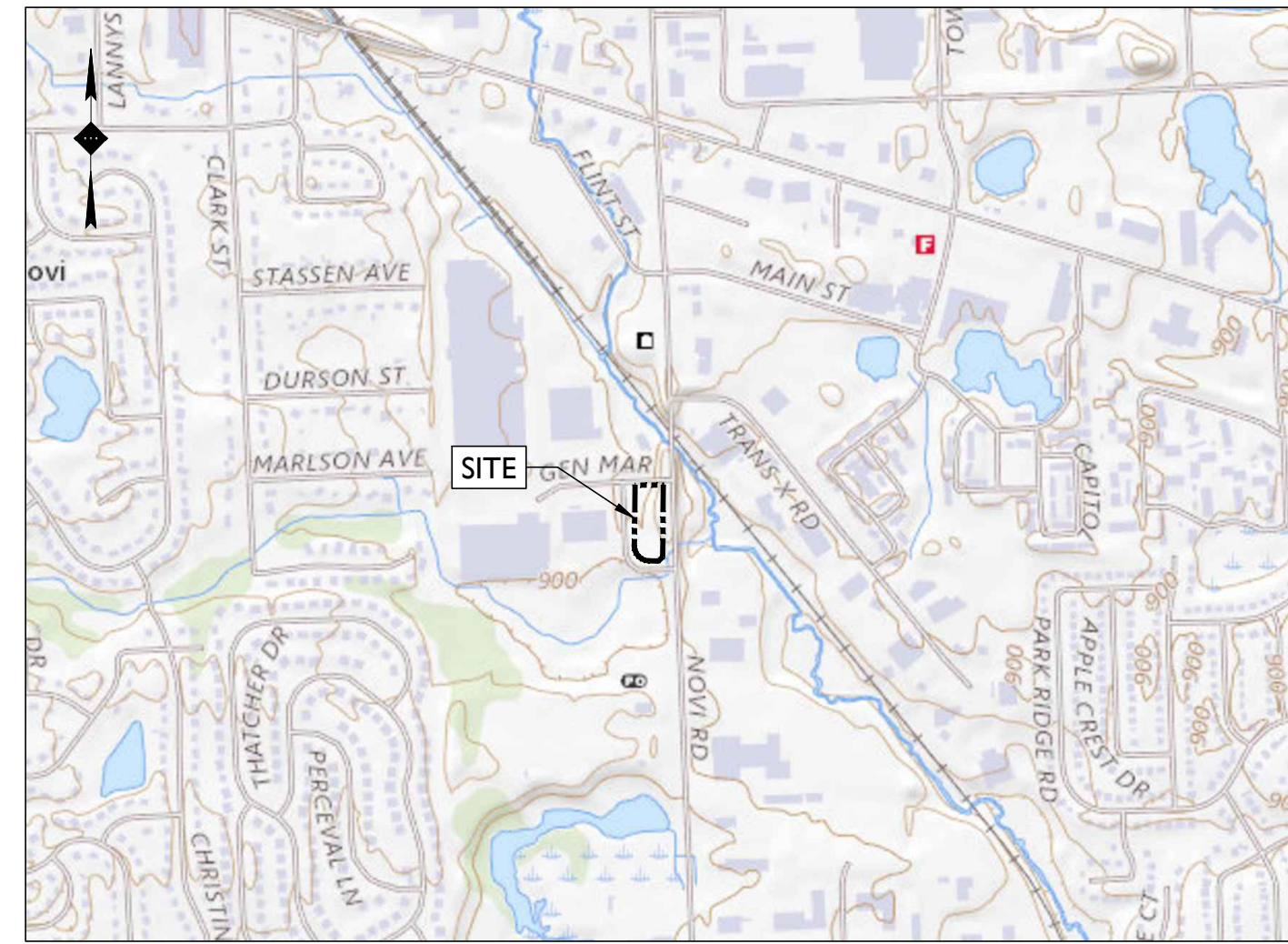
## **Standard #5. Adverse Impact on Surrounding Area.**

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.

As this property has frontage roads on all sides, there is no adverse impact to the adjacent properties. The proposed use and will allow an unused parcel to be developed and landscaped enhancing the entry off of Novi road/Gen Mar to the entire industrial development in lieu of a vacant minimally kept property.

# SITE DEVELOPMENT PLANS FOR PET RESORT NOVI PROPOSED PET BOARDING FACILITY

**APPLICANT**  
STUCKY VITALE ARCHITECTS  
27127 WOODWARD AVENUE  
ROYAL OAK, MI 48067-0925  
248-546-6700  
MBLANEK@STUCKYVITALE.COM



SOURCE: USGS TOPOGRAPHICAL MAPS, DATE RETRIEVED 05/18/2023

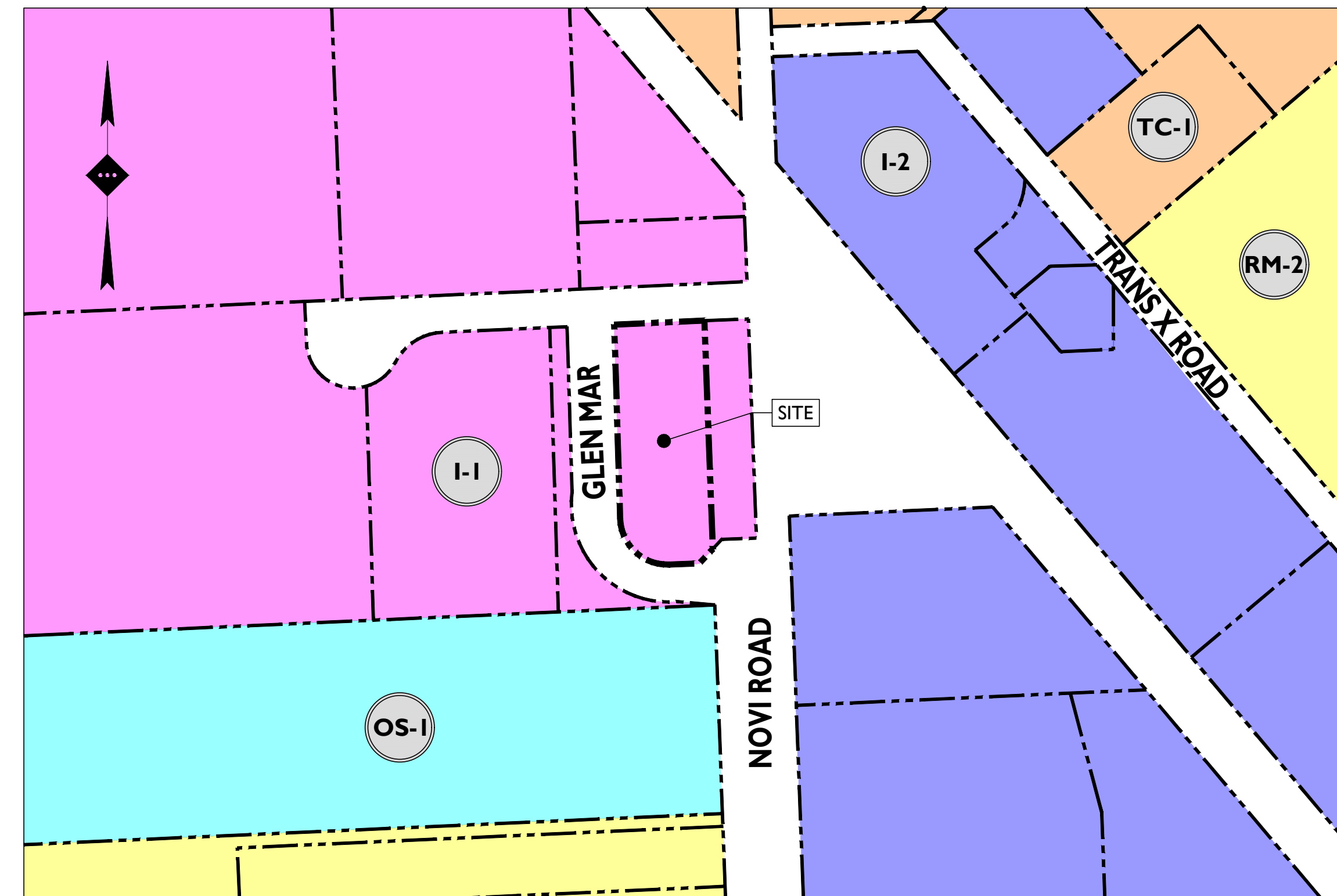
**LOCATION MAP**  
SCALE: 1" = 1000'±

PID: 22-22-276-017  
NORTHWEST CORNER OF NOVI ROAD AND GEN MAR  
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN



SOURCE: NEARMAPS ONLINE MAPPING SYSTEM, DATE RETRIEVED 05/18/2023

**AERIAL MAP**  
SCALE: 1" = 200'±



SOURCE: CITY OF NOVI LAND RECORDS AND PARCELS MAP, CITY OF NOVI ZONING MAP, DATE RETRIEVED 05/18/2023

**ZONING MAP**  
SCALE: 1" = 200'±

**LEGAL DESCRIPTION**

PARCEL ID# 22-22-276-017  
A PARCEL OF LAND BEING PART OF THE NORTHEAST 1/4 OF SECTION 22, OF TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN BEING MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE EAST 1/4 CORNER OF SAID SECTION 22; THENCE NORTH 00 DEGREES 23 MINUTES 56 SECONDS EAST 523.79 FEET ALONG THE EAST LINE OF SAID SECTION 22, SAID LINE ALSO BEING CENTERLINE OF NOVI ROAD (RIGHT OF WAY = 80 FEET); THENCE SOUTH 89 DEGREES 56 MINUTES 56 SECONDS WEST 80.00 FEET TO THE WESTERLY RIGHT OF WAY LINE OF SAID NOVI ROAD AND THE POINT OF BEGINNING; THENCE SOUTH 00 DEGREES 23 MINUTES 56 SECONDS WEST 409.99 FEET ALONG THE WESTERLY RIGHT OF WAY TO A POINT ON THE RIGHT OF WAY LINE GEN MAR DRIVE (VARIABLE WIDTH); THENCE ALONG SAID RIGHT OF WAY LINE THE FOLLOWING FIVE (5) CALLS: (1) SOUTH 45 DEGREES 23 MINUTES 18 SECONDS WEST 35.36 FEET; (2) NORTH 89 DEGREES 37 MINUTES 21 SECONDS WEST 53.99 FEET; (3) 134.08 FEET ALONG THE ARC OF THE CURVE TO THE RIGHT, HAVING A RADIUS 85.00 FEET, CENTRAL ANGLE OF 90 DEGREES 22 MINUTES 43 SECONDS, A CHORD BEARING NORTH 44 DEGREES 25 MINUTES 59 SECONDS WEST 120.60 FEET; (4) NORTH 00 DEGREES 45 MINUTES 22 SECONDS EAST 348.22 FEET; (5) NORTH 89 DEGREES 56 MINUTES 56 SECONDS EAST 161.85 FEET TO THE POINT OF BEGINNING, CONTAINING 1.58 ACRES OF LAND MORE OR LESS. ALSO SUBJECT TO ANY OTHER EASEMENTS OR RESTRICTIONS OF USE OR RECORD.

**PLANS PREPARED BY:**



Detroit, MI · New York, NY · Boston, MA  
Princeton, NJ · Tampa, FL · Rutherford, NJ  
www.stonefieldeng.com

607 Shelby Suite 200, Detroit, MI 48226  
Phone 248.247.1115



Know what's below  
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**ALL WORK SHALL CONFORM TO THE  
CURRENT CITY OF NOVI STANDARDS  
& SPECIFICATIONS**

**PLAN REFERENCE MATERIALS:**

1. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
  - BOUNDARY & TOPOGRAPHICAL SURVEY PREPARED BY NOWRY & HALE LAND SURVEYING LLC, DATED 03/15/2023
  - ARCHITECTURAL PLANS PREPARED BY STUCKY VITALE ARCHITECTS, DATED 05/05/2023
  - AERIAL MAP PROVIDED BY NEARMAPS ONLINE MAPPING SYSTEM, DATE RETRIEVED 05/18/2023
  - LOCATION MAP PROVIDED BY USGS TOPOGRAPHICAL MAPS, DATE RETRIEVED 05/18/2023
2. ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.

**SHEET INDEX**

DRAWING TITLE	SHEET #
COVER SHEET	C-1
SITE PLAN	C-2
FIRE TRUCK CIRCULATION	C-3
GRADING PLAN	C-4
STORMWATER MANAGEMENT PLAN	C-5
UTILITY PLAN	C-6
LANDSCAPING PLAN	C-7
LANDSCAPING AREA AND TREE LAYOUT PLAN	C-8
LANDSCAPING DETAILS	C-9
LIGHTING PLAN	C-10
SOIL EROSION AND SEDIMENTATION CONTROL PLAN	C-11
CONSTRUCTION DETAILS	C-12, 13, & 14

**ADDITIONAL SHEETS**

DRAWING TITLE	SHEET #
BOUNDARY & TOPOGRAPHIC SURVEY	1 OF 1

ISSUE	DATE	BY	DESCRIPTION
2	07/19/2023	NB	RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL
1	05/23/2023	NB	PRELIMINARY SITE PLAN APPROVAL

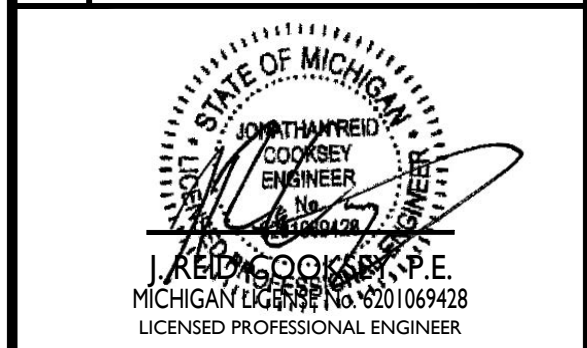
NOT APPROVED FOR CONSTRUCTION

**STONEFIELD**  
engineering & design

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**SITE DEVELOPMENT PLANS**  
**PET RESORT NOVI**  
**PROPOSED PET BOARDING FACILITY**

PID: 22-22-276-017  
NOVI ROAD AND GEN MAR  
CITY OF NOVI  
OAKLAND COUNTY, MICHIGAN



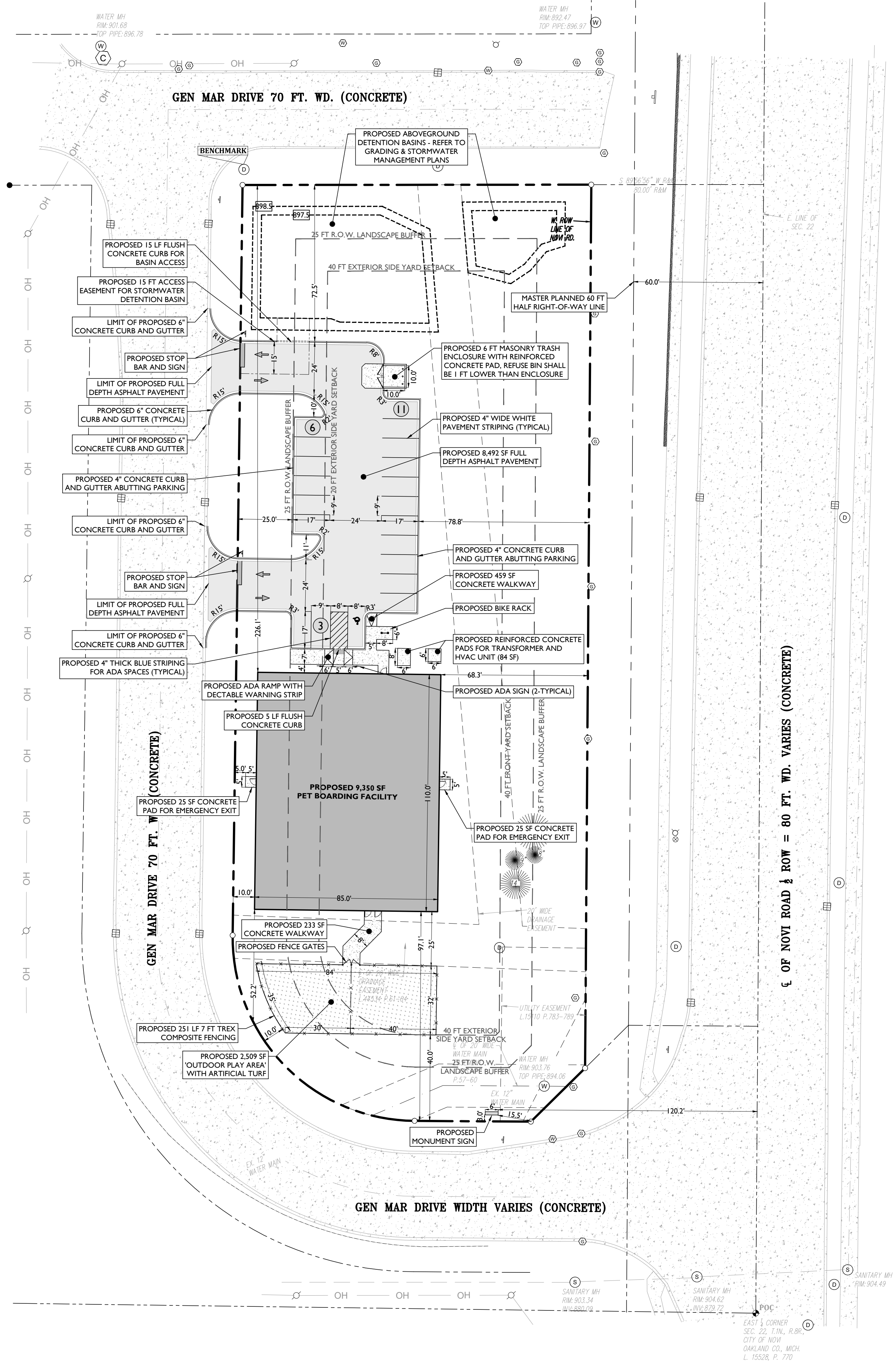
**STONEFIELD**  
engineering & design

SCALE: AS SHOWN PROJECT ID: DET-230040

TITLE:  
**COVER SHEET**

DRAWING:  
**C-1**





LAND USE AND ZONING		
PID: 22-22-276-017		
LIGHT INDUSTRIAL DISTRICT (I-1)		
<b>PROPOSED USE</b>	PET BOARDING FACILITY OUTDOOR FACILITIES (PLAY AREA)	PERMITTED USE PERMITTED ACCESSORY USE
<b>ZONING REQUIREMENT</b>	<b>REQUIRED</b>	<b>PROPOSED</b>
MINIMUM LOT AREA	N/A	69,004 SF (1.58 AC)
MAXIMUM BUILDING HEIGHT	40 FT	< 40 FT
MAXIMUM LOT COVERAGE	N/A	13.5% (9,350 SF)
MINIMUM OPEN SPACE AREA	25%	59.9% (41,301 SF)
MINIMUM FRONT YARD SETBACK	40 FT	68.3 FT (M)
MINIMUM SIDE YARD SETBACK	20 FT	N/A
MINIMUM SIDE STREET YARD SETBACK (SOUTH)	40 FT	97.1 FT
MINIMUM SIDE STREET YARD SETBACK (NORTH)	40 FT	226.1 FT (M)
MINIMUM SIDE STREET YARD SETBACK (WEST)	40 FT	10.0 FT (M)
MINIMUM REAR YARD SETBACK	20 FT	N/A
MINIMUM SETBACK AREA	39,963 SF	39,996 SF
MINIMUM R.O.W. LANDSCAPE BUFFER	25 FT	10.0 FT (V)
MINIMUM SIDE & REAR YARD PARKING SETBACK	10 FT	25.0 FT

(M) PROPOSED MODIFICATION - PER SECTION 3.3.6.0 - PLANNING COMMISSION MAY MODIFY SETBACK REQUIREMENTS IN THOSE INSTANCES WHERE IT DETERMINES THAT SUCH MODIFICATION MAY RESULT IN IMPROVED USE OF THE SITE AND/OR IMPROVED LANDSCAPING. PROVIDED, THAT THE MODIFICATION DOES NOT REDUCE THE TOTAL AREA OF SETBACK ON THE SITE BELOW THE MINIMUM REQUIREMENTS.

**MODIFICATIONS:**  
 -INCREASE FRONT YARD SETBACK BY 38.3 FT: 40 + 38.3 = 68.3 FT  
 -INCREASE NORTH SIDE STREET YARD SETBACK BY 10 FT: 40 + 10 = 50 FT  
 -REDUCE WEST SIDE STREET YARD SETBACK BY 30 FT: 40 - 30 = 10 FT

(V) PROPOSED VARIANCE

OFF-STREET PARKING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 5.2.12.C	PET BOARDING FACILITIES: 1 SPACE PER 700 SF OF USEABLE FLOOR AREA (8,964 SF / 1 SPACE / 700 SF) = 13 SPACES	20 SPACES
§ 5.3.2	90° PARKING: 19 FT X 9 FT WITH 24 FT AISLE (1)	9 FT X 17 FT W/ 24 FT AISLE
§ 5.3.2	BICYCLE PARKING: 2 SPACES REQUIRED 2 FT X 6 FT WITH 4 FT MANEUVERING LANE	2 SPACES W/ 4 FT AISLE

(1) PARKING SPACES MAY BE REDUCED IN LENGTH BY UP TO 2 FT WHEN ABUTTING LANDSCAPING OR WALKWAYS 7 FT IN WIDTH

PAVEMENT QUANTITIES	
CONCRETE CURB & GUTTER	556 LF
FULL-DEPTH ASPHALT	8,492 SF
CONCRETE SIDEWALK (4")	743 SF
REINFORCED CONCRETE PAD	295 SF

FOR MUNICIPAL REFERENCE ONLY. CONTRACTOR TO VERIFY QUANTITIES PRIOR TO CONSTRUCTION.

M.U.T.C.D. NUMBER	TEXT	COLOR		SIZE OF SIGN (WIDTH X HEIGHT)	TYPE OF MOUNT	QUANTITY
		LEGEND	BACKGROUND			
STOP SIGN (R1-1)		WHITE	RED	36"x36"	GROUND	2

NOTE:  
 1. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), EXCEPT AS NOTED.  
 2. ALL SIGNS SHALL BE MOUNTED AS TO NOT OBSTRUCT THE SHAPE OF 'STOP' (R1-1) AND 'YIELD' (R1-2) SIGNS.

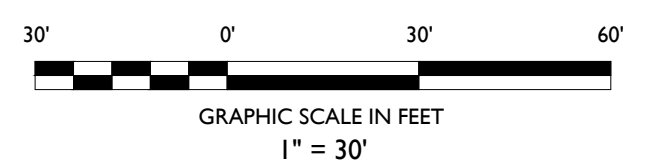
**SIGN DATA TABLE**

NOT TO SCALE

SYMBOL	DESCRIPTION
	PROPERTY LINE
	SETBACK LINE
	PROPOSED CURB & GUTTER
	PROPOSED FLUSH CURB
	PROPOSED SIGNS / BOLLARDS
	PROPOSED BUILDING
	PROPOSED CONCRETE PAVEMENT
	PROPOSED ASPHALT PAVEMENT
	PROPOSED ARTIFICIAL TURF
	PROPOSED TREX COMPOSITE FENCE
	PROPOSED BUILDING DOORS
	PROPOSED DETENTION BASIN

**GENERAL NOTES**

- THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
- ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC AND ITS SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
- THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
- THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
- THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
- THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF STREET OPENING PERMITS.
- THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.
- SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.
- PETS SHALL NOT STAY OUTSIDE OVERNIGHT.
- ANIMAL WASTE, BIOHAZARD MATERIALS OR BYPRODUCTS SHALL BE DISPOSED OF AS RECOMMENDED BY THE MICHIGAN DEPARTMENT OF PUBLIC HEALTH AND/OR OTHER DULY APPOINTED AUTHORITY AT THE DISCRETION OF THE CITY.
- NOISE SHALL BE MINIMIZED AND WILL NOT EXCEED 70 DECIBELS AT NIGHT TIME AND 75 DECIBELS DURING DAYTIME.
- ANIMAL PICK-UP AND DROP-OFF SHALL BE ACCOMMODATED IN AN EFFICIENT MANNER AS TO NOT DISRUPT TRAFFIC CIRCULATION.



NO.	DATE	ISSUE	DESCRIPTION
1	07/19/2023	NB	RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL
2	05/23/2023	NB	PRELIMINARY SITE PLAN APPROVAL

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**SITE DEVELOPMENT PLANS**

**PET RESORT NOVI**

**PROPOSED PET BOARDING FACILITY**

PID: 22-22-276-017  
NOVI ROAD AND GEN MAR  
CITY OF NOVI  
OAKLAND COUNTY, MICHIGAN

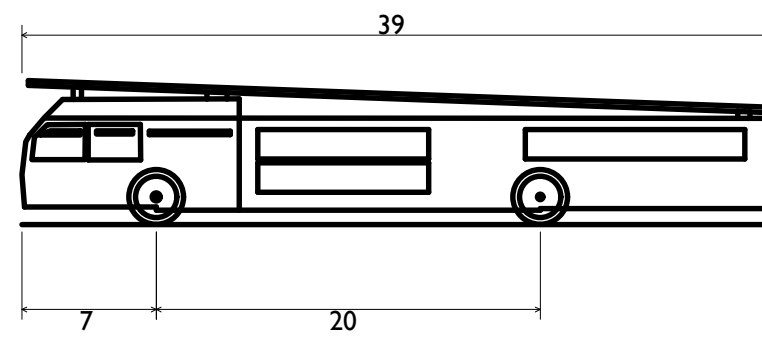
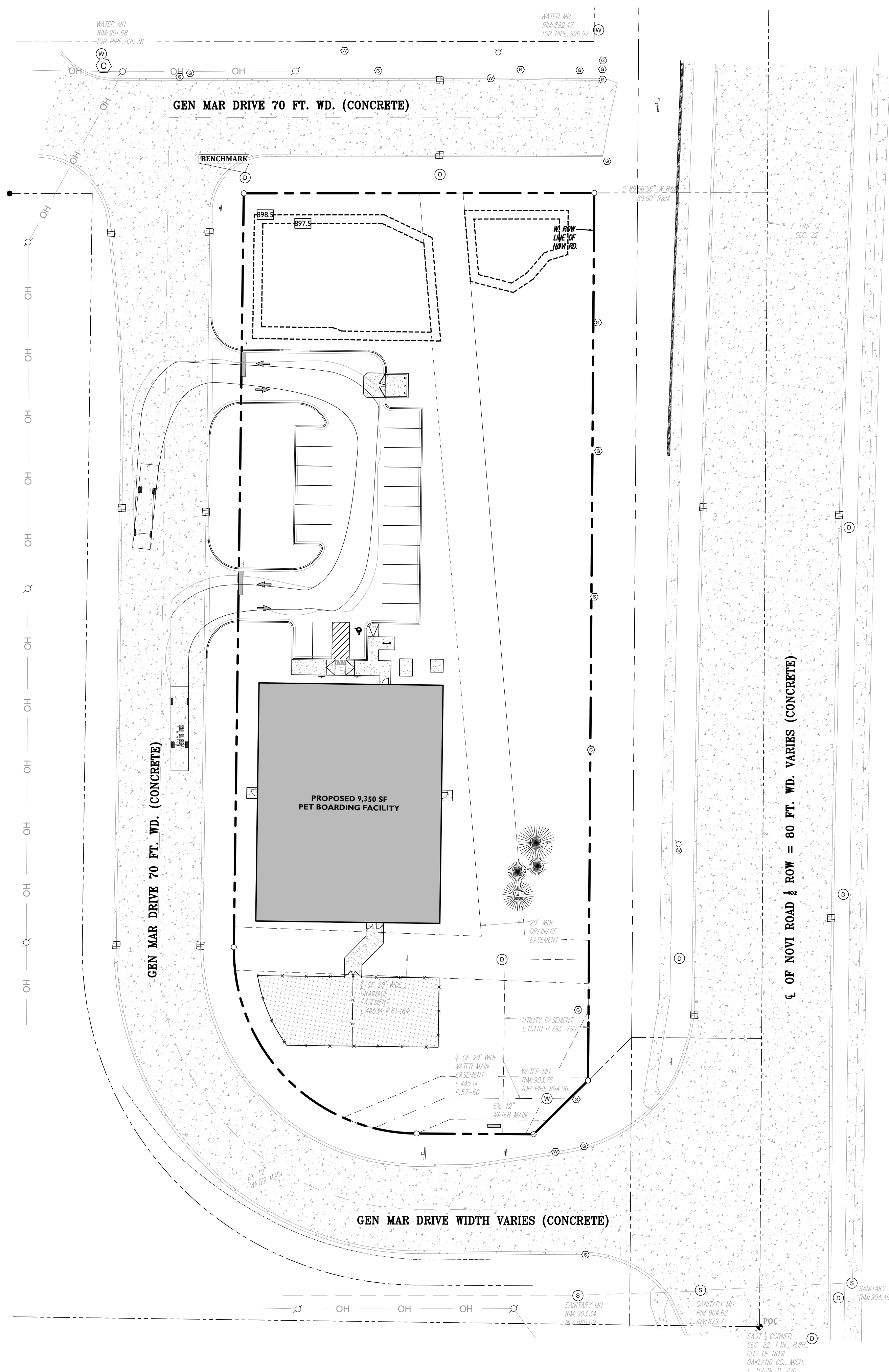
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SCALE: 1" = 30' PROJECT ID: DET-230040

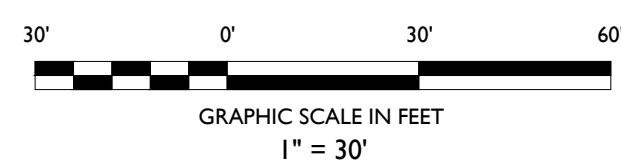
TITLE:  
**SITE PLAN**

DRAWING:  
**C-2**

V:\DET23004\DET23004\PROJECTS\DET23004\NOV1\NOV1.DWG, NOV1\RECORD\NOV1.DWG, NOV1\RECORD\NOV1.DWG



Aerial Fire Truck  
 Overall Length 39.000ft  
 Overall Width 8.167ft  
 Overall Body Height 7.500ft  
 Min Body Ground Clearance 0.750ft  
 Track Width 8.167ft  
 Lock-to-lock time 5.00s  
 Max Wheel Angle 45.00°



ISSUE	DATE	BY	DESCRIPTION
1	05/23/2023	NB	PRELIMINARY SITE PLAN APPROVAL
2	07/19/2023	NB	RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL

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SITE DEVELOPMENT PLANS  
**PET RESORT NOVI**  
**PROPOSED PET BOARDING FACILITY**

PID: 22-22-274-017  
 NOVI ROAD AND GEN MAR  
 CITY OF NOVI  
 OAKLAND COUNTY, MICHIGAN

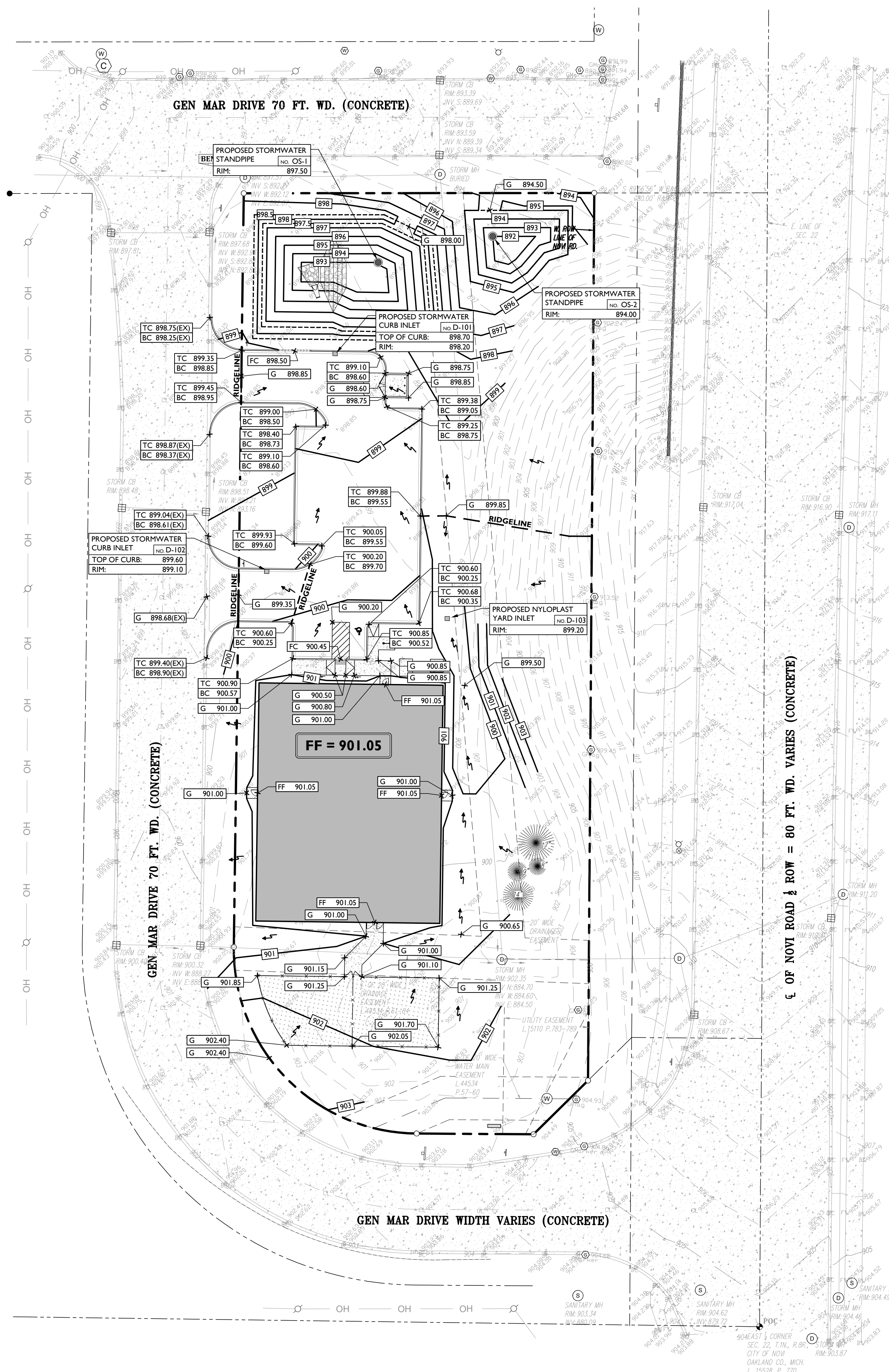


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SCALE: 1" = 30' PROJECT ID: DET-230040

TITLE: **SITE PLAN**

DRAWING: **C-3**



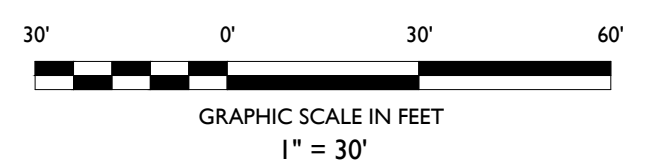
**BENCHMARK:**  
 CITY OF NOVI #2311  
 XX ON NORTH RIM OF SANITARY MANHOLE LOCATED ACROSS FROM INTERSECTION OF GEN-MAR AND NOVI ROAD, 45 EAST OF CENTERLINE OF NOVI ROAD AND 80 FEET NORTH OF CENTERLINE OF GEN-MAR.  
 ELEVATION = 892.089800 NAVD88

**ONSITE**  
 THE NORTH RIM OF STORM MANHOLE LOCATED 7 FEET NORTH AND 1 FEET FROM THE NORTH-WESTERLY MOST PROPERTY CORNER.  
 ELEVATION = 897.57 NAVD88

SYMBOL	DESCRIPTION
---	PROPERTY LINE
—100—	PROPOSED GRADING CONTOUR
—RIDGE LINE—	PROPOSED GRADING RIDGELINE
←	PROPOSED DIRECTION OF DRAINAGE FLOW
X G 100.00	PROPOSED GRADE SPOT SHOT
X TC 100.50 BC 100.00	PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT
X FC 100.00	PROPOSED FLUSH CURB SPOT SHOT
[Stormwater Structure Symbols]	PROPOSED STORMWATER STRUCTURES

- GRADING NOTES**
- ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS. ANY GROUNDWATER DE-WATERING PRACTICES SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FOR THE DISCHARGE OF DE-WATERED GROUNDWATER. ALL SOIL IMPORTED TO THE SITE SHALL BE CERTIFIED CLEAN FILL. CONTRACTOR SHALL MAINTAIN RECORDS OF ALL FILL MATERIALS BROUGHT TO THE SITE.
  - THE CONTRACTOR IS REQUIRED TO PROVIDE TEMPORARY AND/OR PERMANENT SHORING WHERE REQUIRED DURING EXCAVATION ACTIVITIES INCLUDING BUT NOT LIMITED TO UTILITY TRENCHES, TO ENSURE THE STRUCTURAL INTEGRITY OF NEARBY STRUCTURES AND STABILITY OF THE SURROUNDING SOILS.
  - PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 4 INCHES TO 7 INCHES ABOVE EXISTING GRADES UNLESS OTHERWISE NOTED. THE CONTRACTOR WILL SUPPLY ALL STAKEOUT CURB GRADE SHEETS TO STONEFIELD ENGINEERING & DESIGN, LLC. FOR REVIEW AND APPROVAL PRIOR TO POURING CURBS.
  - THE CONTRACTOR IS RESPONSIBLE TO SET ALL PROPOSED UTILITY COVERS AND RESET ALL EXISTING UTILITY COVERS WITHIN THE PROJECT LIMITS TO PROPOSED GRADE IN ACCORDANCE WITH ANY APPLICABLE MUNICIPAL, COUNTY, STATE AND/OR UTILITY AUTHORITY REGULATIONS.
  - MINIMUM SLOPE REQUIREMENTS TO PREVENT PONDING SHALL BE AS FOLLOWS:
    - CURB GUTTER: 0.50%
    - CONCRETE SURFACES: 1.00%
    - ASPHALT SURFACES: 1.00%
  - A MINIMUM SLOPE OF 1.00% SHALL BE PROVIDED AWAY FROM ALL BUILDINGS. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE BUILDING IS ACHIEVED AND SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IF THIS CONDITION CANNOT BE MET.
  - FOR PROJECTS WHERE BASEMENTS ARE PROPOSED, THE DEVELOPER IS RESPONSIBLE TO DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED STRUCTURE. IF GROUNDWATER IS ENCOUNTERED WITHIN THE BASEMENT AREA, SPECIAL CONSTRUCTION METHODS SHALL BE UTILIZED AND REVIEWED/APPROVED BY THE CONSTRUCTION CODE OFFICIAL. IF SUMP PUMPS ARE UTILIZED, ALL DISCHARGES SHALL BE CONNECTED DIRECTLY TO THE PUBLIC STORM SEWER SYSTEM WITH APPROVAL FROM THE GOVERNING STORM SEWER SYSTEM AUTHORITY.

- ADA NOTES**
- THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION WITHIN THE ADA PARKING SPACES AND ACCESS AISLES.
  - THE CONTRACTOR SHALL PROVIDE COMPLIANT SIGNAGE AT ALL ADA PARKING AREAS IN ACCORDANCE WITH STATE GUIDELINES.
  - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 5.00% RUNNING SLOPE AND A MAXIMUM OF 2.00% CROSS SLOPE ALONG WALKWAYS WITHIN THE ACCESSIBLE PATH OF TRAVEL (SEE THE SITE PLAN FOR THE LOCATION OF THE ACCESSIBLE PATH). THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE ACCESSIBLE PATH OF TRAVEL IS 36 INCHES WIDE OR GREATER UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
  - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION AT ALL LANDINGS. LANDINGS INCLUDE, BUT ARE NOT LIMITED TO, THE TOP AND BOTTOM OF AN ACCESSIBLE RAMP. AT ACCESSIBLE BUILDING ENTRANCES, AT AN AREA IN FRONT OF A WALK-UP ATM, AND AT TURNING SPACES ALONG THE ACCESSIBLE PATH OF TRAVEL, THE LANDING AREA SHALL HAVE A MINIMUM CLEAR AREA OF 60 INCHES BY 60 INCHES UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
  - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 8.33% RUNNING SLOPE AND A MAXIMUM 2.00% CROSS SLOPE ON ANY CURB RAMPS ALONG THE ACCESSIBLE PATH OF TRAVEL. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 10.00%. IF A LANDING AREA IS PROVIDED AT THE TOP OF THE RAMP, FOR ALTERATIONS, A CURB RAMP FLARE SHALL NOT HAVE A SLOPE GREATER THAN 8.33% IF A LANDING AREA IS NOT PROVIDED AT THE TOP OF THE RAMP. CURB RAMPS SHALL NOT RISE MORE THAN 6 INCHES IN ELEVATION WITHOUT A HANDRAIL. THE CLEAR WIDTH OF A CURB RAMP SHALL BE NO LESS THAN 36 INCHES WIDE.
  - ACCESSIBLE RAMPS WITH A RISE GREATER THAN 6 INCHES SHALL CONTAIN COMPLIANT HANDRAILS ON BOTH SIDES OF THE RAMP AND SHALL NOT RISE MORE THAN 30" IN ELEVATION WITHOUT A LANDING AREA IN BETWEEN RAMP RUNS. LANDING AREAS SHALL ALSO BE PROVIDED AT THE TOP AND BOTTOM OF THE RAMP.
  - A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS.
  - THE CONTRACTOR SHALL ENSURE A MAXIMUM OF ¼ INCHES VERTICAL CHANGE IN LEVEL ALONG THE ACCESSIBLE PATH. WHERE A CHANGE IN LEVEL BETWEEN ¼ INCHES AND ½ INCHES EXISTS, CONTRACTOR SHALL ENSURE THAT THE TOP ¼ INCH CHANGE IN LEVEL IS BEVELED WITH A SLOPE NOT STEEPER THAN 1 UNIT VERTICAL AND 2 UNITS HORIZONTAL (2:1 SLOPE).
  - THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR HORIZONTAL SEPARATION) ALONG THE ACCESSIBLE PATH SHALL NOT ALLOW PASSAGE OF A SPHERE GREATER THAN ¼ INCH.



RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL	PRELIMINARY SITE PLAN APPROVAL	DATE	ISSUE	BY	DESCRIPTION
		07/19/2023	1		
		05/23/2023	2		

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SITE DEVELOPMENT PLANS

**PET RESORT NOVI**

PROPOSED PET BOARDING FACILITY

PID: 22-22-27-6-017  
 NOVI ROAD AND GEN MAR  
 CITY OF NOVI  
 OAKLAND COUNTY, MICHIGAN

STATE OF MICHIGAN  
 JAMES COOKSEY  
 LICENSED PROFESSIONAL ENGINEER  
 MICHIGAN LICENSE NO. 9201069428

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SCALE: 1" = 30' PROJECT ID: DET-230040

TITLE:  
**GRADING PLAN**

DRAWING:  
**C-4**

## PROPOSED 'BASIN A'

**STORMWATER MANAGEMENT CALCULATIONS**  
(Based on the City of Novi Engineering Design Manual)

Project:	Novi Road & Gen Mar, Novi, MI	Designer:	NB	Date:	05/22/23
<b>COMPOSITE C VALUE</b>					
Landcover	Area (SF)	C-Value*	Weighted Value		
Building / Roof	9,350	0.95	= 8,883		
Asphalt or Concrete Pavements	9,389	0.95	= 8,920		
Turf Grass Lawn	2,352	0.35	= 823		
Open Space (HSG C <4% Slope)	35,095	0.30	= 10,529		
<b>Subtotals</b>	<b>56,186</b>		<b>29,154</b>		
Total Area (Acres)	1.29	Composite C Value, C <sub>c</sub>	0.52		
*C-values obtained from City of Novi Engineering Design Manual					
<b>ALLOWABLE SITE DISCHARGE &amp; BASIN DISCHARGE RATIO</b>					
Site Area, A <sub>s</sub>	1.29 AC	*Allowable Discharge Ratio:	0.15 CFS/AC		
*Allowable discharge ratio based on City of Novi Engineering Design Manual					
<b>Basin Discharge Ratio, Q<sub>b</sub> = 0.19 CFS</b>					
<b>Basin Discharge Ratio, Q<sub>b</sub> = 0.29 CFS/AC/IMP</b>					
<b>BASIN STORAGE TIME</b>					
Design Storm Frequency:	100 YR	Basin Storage Time, T:	163.87 MINS		
<b>STORMWATER QUALITY CONTROL VOLUME REQUIRED</b>					
Stormwater Quality Volume, V <sub>q</sub> :			1,215 CF		
<b>BASIN VOLUME REQUIRED</b>					
Basin Volume Ratio, V <sub>r</sub> :			12.421 CFS/AC/IMP		
Basin Volume Required, V <sub>r</sub> :			8,314 CF		
<b>Proposed 100-Year Detention Volume</b>					
<b>Forebay (Water Quality) Design</b>					
Elevation	Face Area (SF)	Total Volume (CF)			
893.00	78	0			
894.00	252	165			
895.00	540	561			
896.00	940	1,301			
<b>Overall Above Ground Basin Design</b>					
Elevation	Face Area (SF)	Total Volume (CF)			
893.00	0	0			
893.00	445	223			
894.00	915	903			
895.00	1,534	2,127			
896.00	2,285	4,037			
897.00	3,150	6,754			
897.50	3,639	8,451			
898.50	4,736	12,669			
<b>REQUIRED CONTROL ORIFICE SIZE</b>					
Control Orifice Area, A <sub>o</sub> :			2.50 IN <sup>2</sup>		
Control Orifice Diameter, D <sub>o</sub> :			1.79 IN		
Orifice Diameter Proposed:			1.75 IN		

## PROPOSED 'BASIN B'

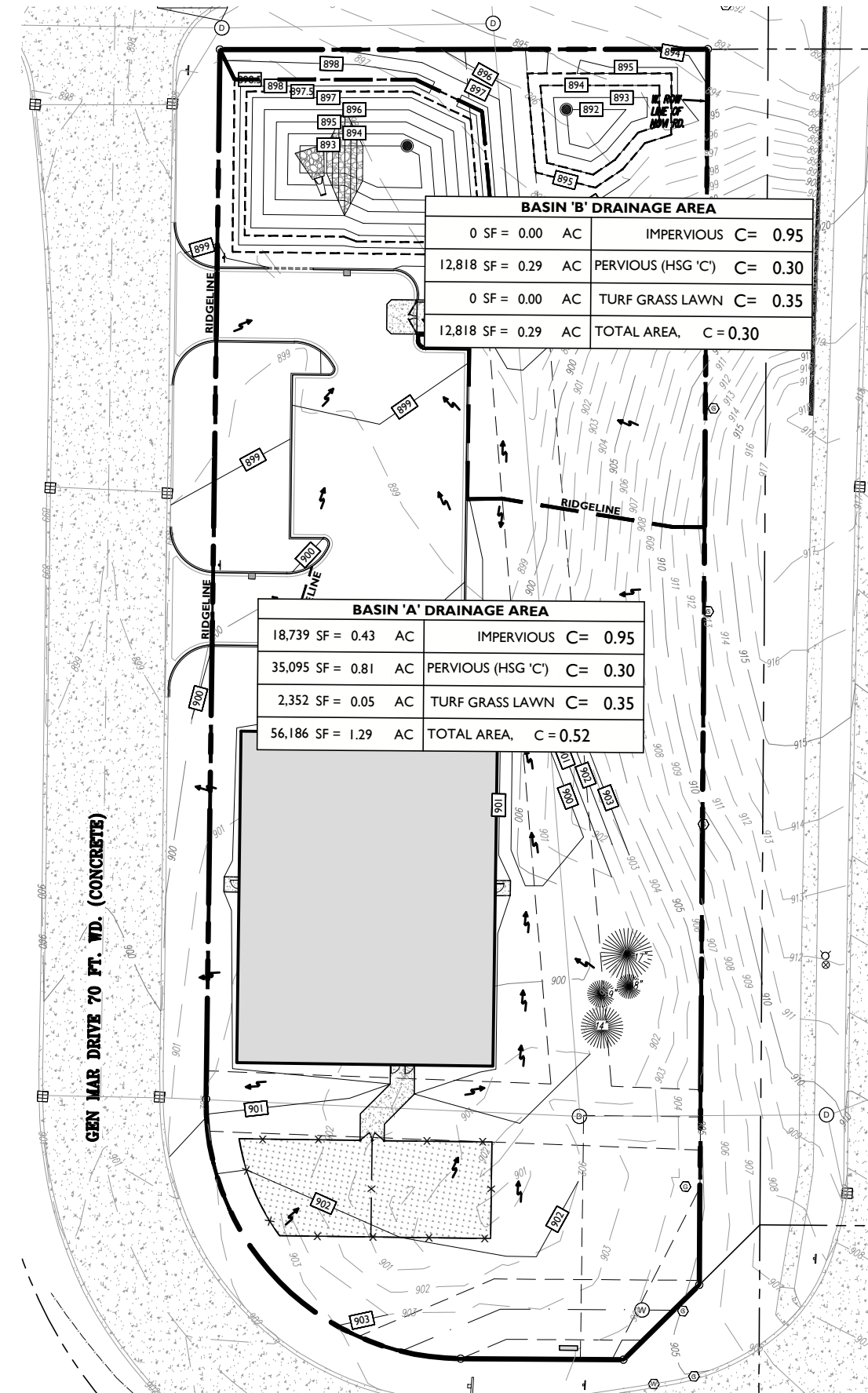
**STORMWATER MANAGEMENT CALCULATIONS**  
(Based on the City of Novi Engineering Design Manual)

Project:	Novi Road & Gen Mar, Novi, MI	Designer:	NB	Date:	05/22/23
<b>COMPOSITE C VALUE</b>					
Landcover	Area (SF)	C-Value*	Weighted Value		
Building / Roof	0	0.95	= 0		
Asphalt or Concrete Pavements	0	0.95	= 0		
Turf Grass Lawn	0	0.35	= 0		
Open Space (HSG C <4% Slope)	12,818	0.30	= 3,845		
<b>Subtotals</b>	<b>12,818</b>		<b>3,845</b>		
Total Area (Acres)	0.29	Composite C Value, C <sub>c</sub>	0.30		
*C-values obtained from City of Novi Engineering Design Manual					
<b>ALLOWABLE SITE DISCHARGE &amp; BASIN DISCHARGE RATIO</b>					
Site Area, A <sub>s</sub>	0.29 AC	*Allowable Discharge Ratio:	0.15 CFS/AC		
*Allowable discharge ratio based on City of Novi Engineering Design Manual					
<b>Basin Discharge Ratio, Q<sub>b</sub> = 0.04 CFS</b>					
<b>Basin Discharge Ratio, Q<sub>b</sub> = 0.50 CFS/AC/IMP</b>					
<b>BASIN STORAGE TIME</b>					
Design Storm Frequency:	100 YR	Basin Storage Time, T:	118.61 MINS		
<b>STORMWATER QUALITY CONTROL VOLUME REQUIRED</b>					
Stormwater Quality Volume, V <sub>q</sub> :			160 CF		
<b>BASIN VOLUME REQUIRED</b>					
Basin Volume Ratio, V <sub>r</sub> :			11.255 CFS/AC/IMP		
Basin Volume Required, V <sub>r</sub> :			994 CF		
<b>Proposed 100-Year Detention Volume</b>					
<b>Overall Above Ground Basin Design</b>					
Elevation	Face Area (SF)	Total Volume (CF)			
893.00	171	0			
894.00	476	324			
894.00	905	1,014			
895.00	1,456	2,195			
<b>REQUIRED CONTROL ORIFICE SIZE</b>					
Control Orifice Area, A <sub>o</sub> :			0.57 IN <sup>2</sup>		
Control Orifice Diameter, D <sub>o</sub> :			0.85 IN		
Orifice Diameter Proposed:			0.80 IN		

SYMBOL	DESCRIPTION
---	PROPERTY LINE
---	PROPOSED GRADING CONTOUR
---	PROPOSED GRADING RIDGELINE
---	PROPOSED STORMWATER STRUCTURES
---	PROPOSED STORMWATER PIPING

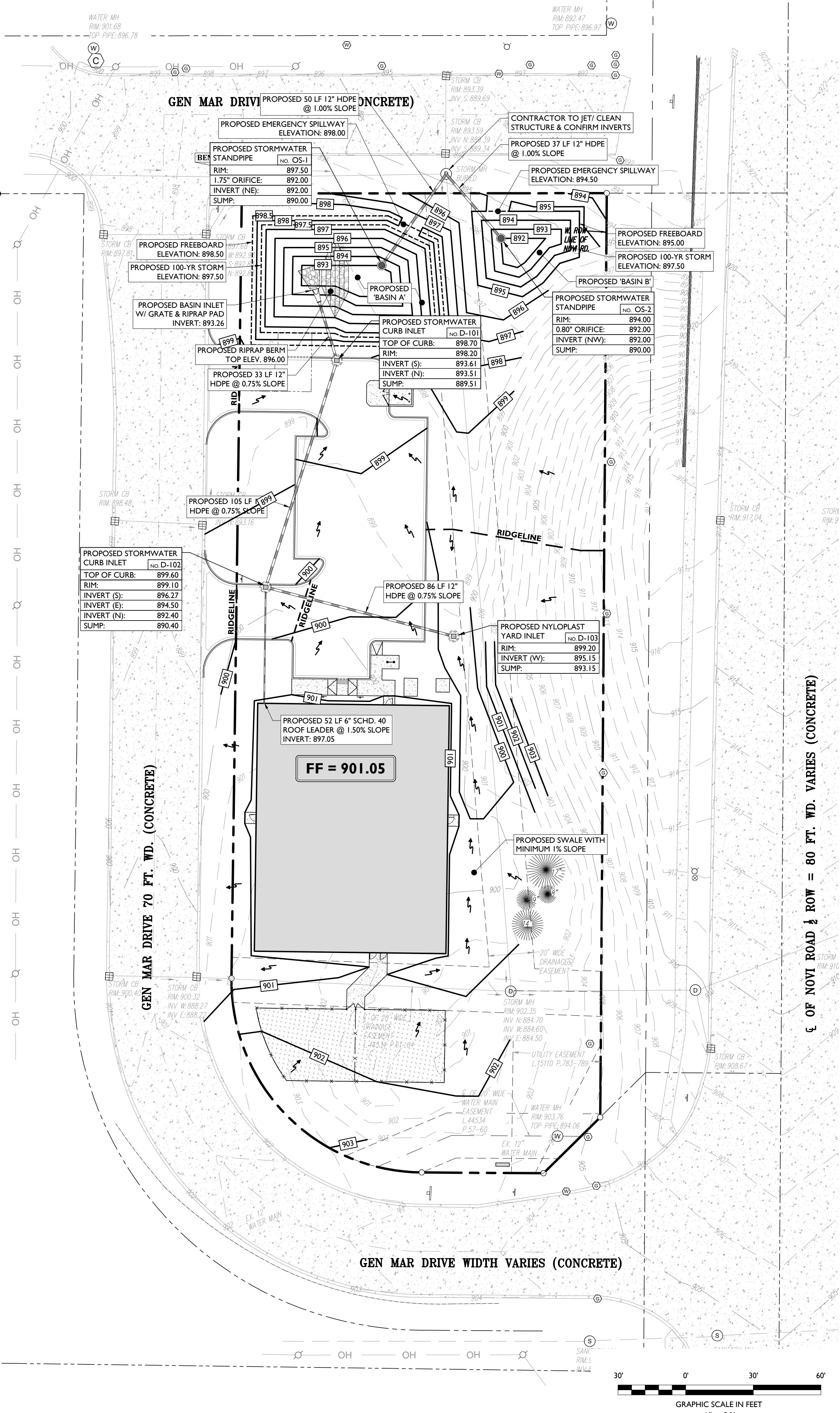
- ### DRAINAGE AND UTILITY NOTES
- THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR STORMWATER IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC, IN WRITING.
  - CONTRACTOR SHALL START CONSTRUCTION OF STORM LINES AT THE LOWEST INVERT AND WORK UP-GRADE.
  - THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC, IMMEDIATELY IN WRITING.
  - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

- ### EXCAVATION, SOIL PREPARATION, AND DEWATERING NOTES
- THE CONTRACTOR IS REQUIRED TO REVIEW THE REFERENCED GEOTECHNICAL DOCUMENTS PRIOR TO CONSTRUCTION. THESE DOCUMENTS SHALL BE CONSIDERED A PART OF THE PLAN SET.
  - THE CONTRACTOR IS REQUIRED TO PREPARE SUBGRADE SOILS BENEATH ALL PROPOSED IMPROVEMENTS AND BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH RECOMMENDATIONS BY THE GEOTECHNICAL ENGINEER OF RECORD.
  - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHORING FOR ALL EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL HAVE THE SHORING DESIGNED BY A QUALIFIED PROFESSIONAL SHORING DESIGNER. THE CONTRACTOR SHALL SUBMIT THE SHORING DESIGNS TO STONEFIELD ENGINEERING & DESIGN, LLC, AND THE OWNER PRIOR TO THE START OF CONSTRUCTION.
  - THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OPEN EXCAVATIONS ARE PERFORMED AND PROTECTED IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
  - THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING DESIGN AND OPERATIONS, AS REQUIRED, TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS AND GROUNDWATER DISPOSAL.



**BASIN DRAINAGE AREAS**

GRAPHIC SCALE IN FEET  
1" = 50'



DATE	ISSUE	BY	DESCRIPTION
07/19/2023	1	NB	RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL
05/23/2023	2	NB	PRELIMINARY SITE PLAN APPROVAL

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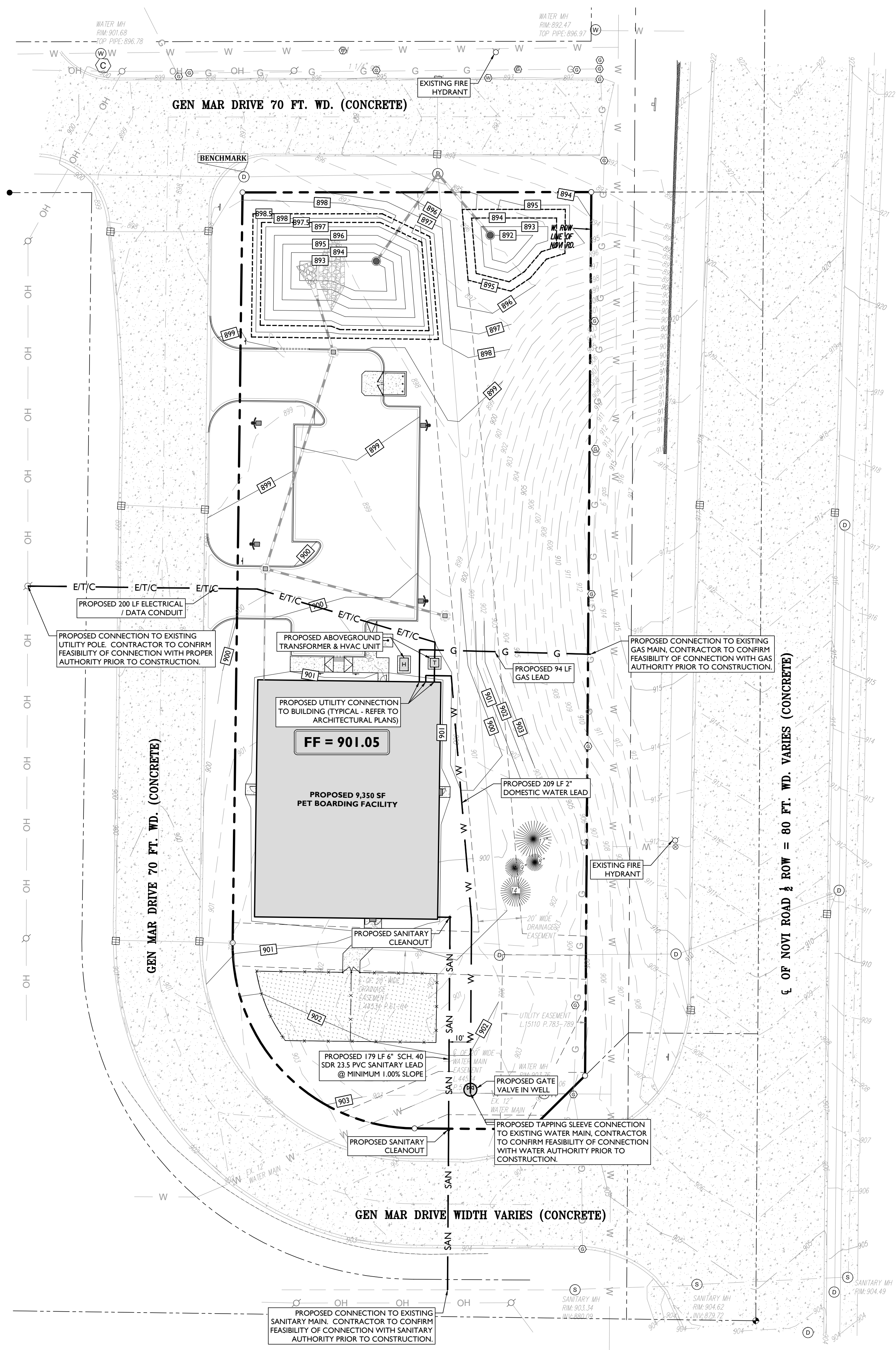
**REID COOKSEY**  
P.E.  
MICHIGAN LICENSE NO. 9201069428  
LICENSED PROFESSIONAL ENGINEER

**STONEFIELD**  
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SCALE: AS SHOWN PROJECT ID: DET-230040

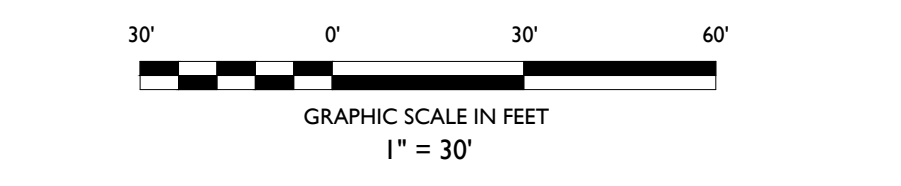
TITLE:  
**STORMWATER MANAGEMENT PLAN**

DRAWING:  
**C-5**



SYMBOL	DESCRIPTION
---	PROPERTY LINE
---	PROPOSED SANITARY LATERAL
---	PROPOSED DOMESTIC WATER SERVICE
---	PROPOSED ELECTRICAL/DATA CONDUITS
---	PROPOSED GAS LINE
⊗	PROPOSED VALVE
⊙	PROPOSED SANITARY MANHOLE / CLEANOUT
T	PROPOSED TRANSFORMER ON CONCRETE PAD WITH BOLLARDS
---	PROPOSED STORMWATER PIPING

- DRAINAGE AND UTILITY NOTES**
- THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
  - THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED.
  - THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY EXISTING UTILITY IDENTIFIED TO REMAIN WITHIN THE LIMITS OF THE PROPOSED WORK DURING CONSTRUCTION.
  - A MINIMUM HORIZONTAL SEPARATION OF 18 FEET IS REQUIRED BETWEEN ANY SANITARY SEWER SERVICE AND ANY WATER LINES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
  - ALL WATER LINES SHALL BE VERTICALLY SEPARATED ABOVE SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
  - THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.
  - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
  - CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER AT THE LOWEST INVERT AND WORK UP-GRADE.
  - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD SET OF PLANS REFLECTING THE LOCATION OF EXISTING UTILITIES THAT HAVE BEEN CAPPED, ABANDONED, OR RELOCATED BASED ON THE DEMOLITION/REMOVAL ACTIVITIES REQUIRED IN THIS PLAN SET. THIS DOCUMENT SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
  - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
  - 6 INCH SANITARY LEADS SHALL BE A MINIMUM SDR 23.5, AND MAINS SHALL BE SDR 26.
  - LEADS SHALL BE BURIED AT LEAST 5 FEET DEEP WHERE UNDER THE INFLUENCE OF PAVEMENT.
  - COMPACTED SAND BACKFILL (MDOT SAND CLASS II) SHALL BE PROVIDED FOR ALL UTILITIES WITHIN THE INFLUENCE OF PAVED AREAS.
  - ALL FIRE HYDRANTS MUST BE INSTALLED AND OPERATIONAL PRIOR TO ANY COMBUSTIBLE MATERIAL IS BROUGHT ON SITE.
  - NEW AND EXISTING BUILDINGS MUST COMPLY WITH THE INTERNATIONAL FIRE CODE SECTION 510 FOR EMERGENCY RADIO COVERAGE. THIS SHALL BE COMPLETED BY THE TIME THE FINAL INSPECTION OF THE FIRE ALARM AND FIRE SUPPRESSION PERMITS.



REVISION	DATE	ISSUE	BY	DESCRIPTION
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engineering & design

SCALE: 1" = 30' PROJECT ID: DET-230040

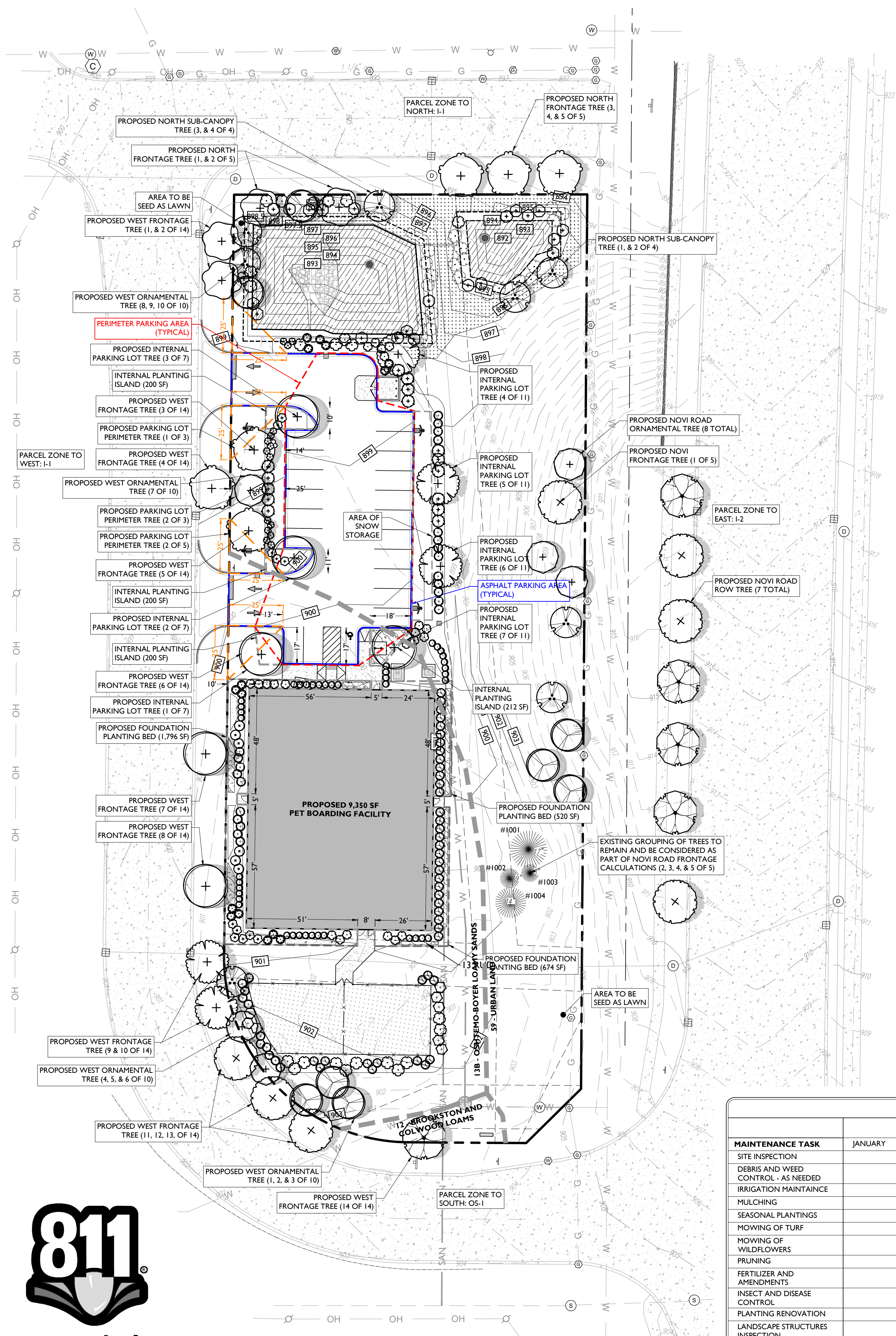
TITLE:  
**UTILITY PLAN**

DRAWING:  
**C-6**

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**EXISTING TREE INVENTORY**

TREE ID NUMBER	SIZE	COMMON NAME	CONDITION	RECOMMENDATION
#1001	17"	NORWAY SPRUCE	FAIR	TO REMAIN
#1002	9"	NORWAY SPRUCE	FAIR	TO REMAIN
#1003	8"	NORWAY SPRUCE	FAIR	TO REMAIN
#1004	14"	NORWAY SPRUCE	FAIR	TO REMAIN

**SOIL CHARACTERISTICS CHART**

TYPE OF SOIL	BROOKSTON AND COLWOOD LAOMS
PERCENT OF SITE COVERAGE	5.2%
HYDROLOGIC SOIL GROUP	B/C/D
DEPTH TO RESTRICTIVE LAYER	> 80 INCHES
SOIL PERMEABILITY	0.20 TO 1.98 IN / HR
DEPTH TO WATER TABLE	ABOUT 0 INCHES
TYPE OF SOIL	OSHTOMO-BOYER LOAMY SANDS
PERCENT OF SITE COVERAGE	24.8%
HYDROLOGIC SOIL GROUP	A
DEPTH TO RESTRICTIVE LAYER	> 80 INCHES
SOIL PERMEABILITY	1.98 TO 5.95 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES
TYPE OF SOIL	URBAN LAND
PERCENT OF SITE COVERAGE	69.9%
HYDROLOGIC SOIL GROUP	C
DEPTH TO RESTRICTIVE LAYER	20 TO 36 INCHES
SOIL PERMEABILITY	0.06 TO 0.20 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES
TYPE OF SOIL	SLOAN - MARLETTE
PERCENT OF SITE COVERAGE	0.1%
HYDROLOGIC SOIL GROUP	B/D
DEPTH TO RESTRICTIVE LAYER	0 TO 12 INCHES
SOIL PERMEABILITY	0.20 TO 1.98 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES

**MAINTENANCE REQUIREMENT SCHEDULE**

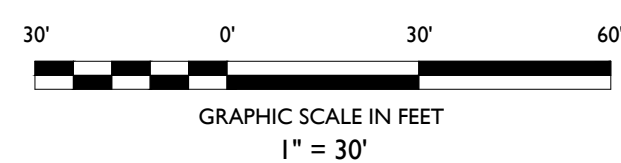
MAINTENANCE TASK	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
SITE INSPECTION			X				X				X	
DEBRIS AND WEED CONTROL - AS NEEDED			X	X	X	X	X	X	X	X	X	
IRRIGATION MAINTENANCE			X							X		
MULCHING			X									
SEASONAL PLANTINGS					X	X	X	X	X	X	X	
MOWING OF TURF			X	X	X	X	X	X	X	X	X	
MOWING OF WILDFLOWERS											X	
PRUNING			X	X							X	
FERTILIZER AND AMENDMENTS			X	X	X	X	X	X	X	X	X	
INSECT AND DISEASE CONTROL					X	X	X	X	X	X	X	
PLANTING RENOVATION			X							X		
LANDSCAPE STRUCTURES INSPECTION				X								
LIGHTING MAINTENANCE			X							X		
PAVED SURFACE MAINTENANCE					X							

- TREE PROTECTION FENCE SHALL BE (1) ONE FOOT OUTSIDE OF THE DRIPLINE
- SHOULD JAPANESE KNOTWEED OR PHRAGMITES BE PRESENT ON SITE THEY SHALL BE REMOVED FROM THE PREMISES
- IRRIGATION PLANS ARE REQUIRED AND SHALL BE PROVIDED AS PART OF THE FINAL SITE PLAN
- THE STORMWATER BASIN IS DESIGNED TO EMPTY 24 - 48 HOURS AFTER RAINFALL EVENT
- NO PROPOSED LOADING ZONE ON SITE
- TREES SHALL BE PLANTED:
  - 10 FEET FROM HYDRANTS AND UTILITY STRUCTURES
  - 5 FEET FROM UTILITY LINES
  - 3 FEET FROM CURBS
- CITY MUST APPROVE ANY SUBSTITUTIONS IN WRITING PRIOR TO INSTALLATION
- NO EXISTING OR PROPOSED OVERHEAD UTILITY LINES ON SITE
- ANY TREE ON SITE WHICH IS REMOVED THAT IS NOT PERMITTED MUST BE REPLACED.
- DEAD OR DECLINING TREES ON SITE SHALL BE REPLACED.

**IRRIGATION NOTE:**  
IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

FOR COMMON AREA IRRIGATION SYSTEMS CONNECTED TO PUBLIC WATER SUPPLIES: INSTALL A BACKFLOW PREVENTION REDUCED PRESSURE ZONE ASSEMBLY (RPZ) WITH AN ASSE 013 LISTING APPROVAL AT EACH TAP TO THE PUBLIC WATER SUPPLY. A MINIMUM CLEARANCE OF 12-INCHES MEASURED FROM THE BOTTOM OF PRESSURE RELIEF VALVE TO THE FINISHED LANDSCAPED GRADE SHALL BE REQUIRED. PROVIDE A DETAIL SHOWING THE RPZ INSTALLATION SETUP AND HEIGHT ABOVE GRADE. IF BACKFLOW PREVENTER IS TO BE ENCLOSED, PROVIDE A DETAIL OF THE ENCLOSURE WITH REQUIRED DRAINAGE OUTLETS. SHOW ALL LOCATIONS ON A SITE PLAN. A PLUMBING PERMIT IS REQUIRED FOR THE INSTALLATION OF THE BACKFLOW PREVENTER. INSTALLATION OF THE BACKFLOW PREVENTER SHALL BE IN SUCH A MANNER AS TO NOT REQUIRE BLOWING OUT THE SYSTEM THROUGH THE BACKFLOW PREVENTER. DRAIN PORTS AND BLOW OUT PORTS SHALL BE INCLUDED. ANY DEVIATIONS FROM THESE REQUIREMENTS MUST BE APPROVED THROUGH THE NOVIO WATER & SEWER DIVISION CROSS CONNECTION CONTROL SPECIALIST (248-735-5661).

- LANDSCAPING NOTES**
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
  - THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
  - THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH.
  - THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
  - THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
  - THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.
  - ALL TRANSFORMERS MUST BE SCREENED PER THE CITY OF NOVIO STANDARDS AND SPECIFICATIONS.



PAUL DEVITTO, L.L.A.  
MICHIGAN LICENSE No. 3901001797  
LICENSED LANDSCAPE ARCHITECT

**811**  
Know what's below  
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ISSUE	DATE	BY	DESCRIPTION
2	07/19/2023	NB	RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL
1	05/23/2023	NB	PRELIMINARY SITE PLAN APPROVAL

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Phone 248.247.1115

**SITE DEVELOPMENT PLANS**

**PET RESORT NOVIO**

**PROPOSED PET BOARDING FACILITY**

22-22-274-017  
NOVIO ROAD AND GEN MAR  
CITY OF NOVIO  
OAKLAND COUNTY, MICHIGAN

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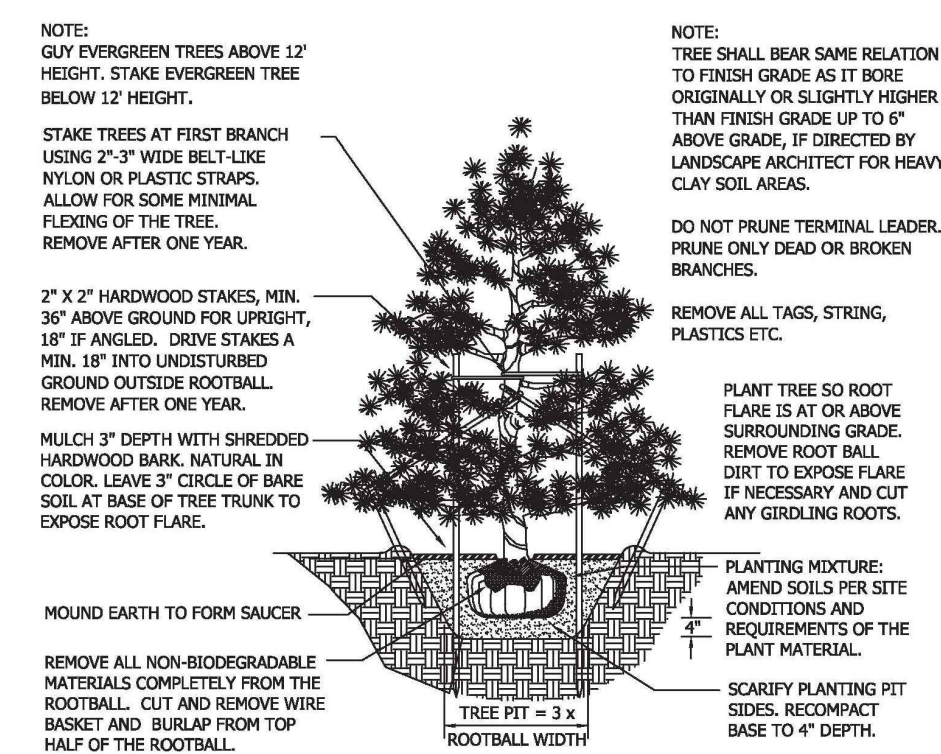
J. REID COOKSEY, P.E.  
MICHIGAN LICENSE No. 6201069428  
LICENSED PROFESSIONAL ENGINEER

SCALE: 1" = 30' PROJECT ID: DET-230040

TITLE:  
**LANDSCAPING AREA AND TREE LAYOUT PLAN**

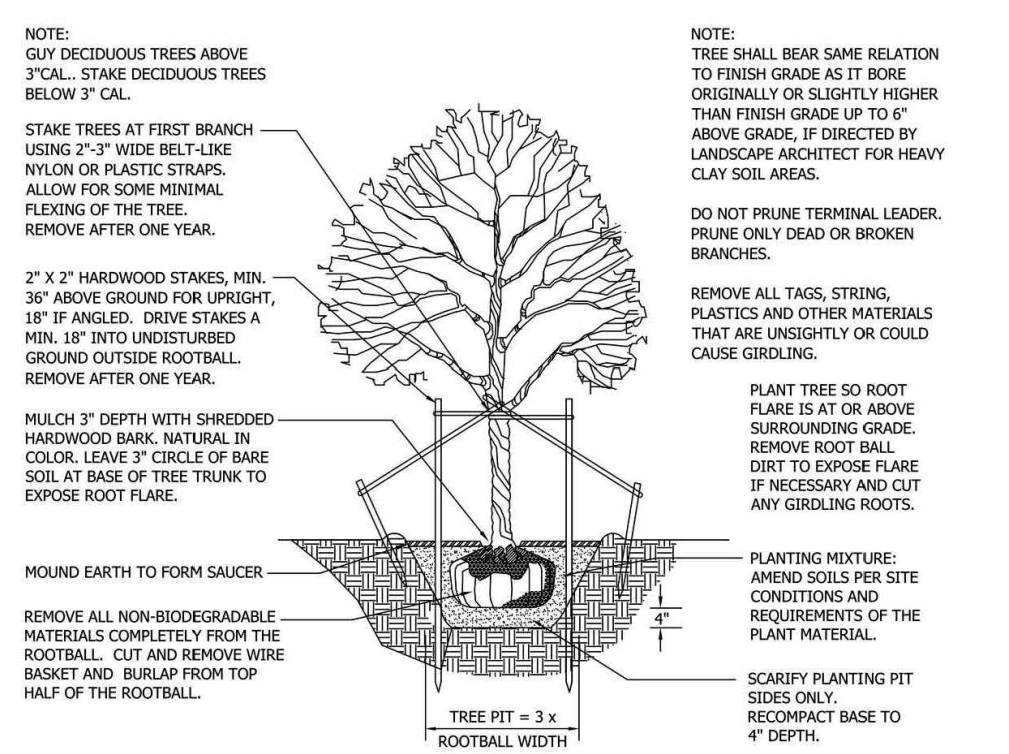
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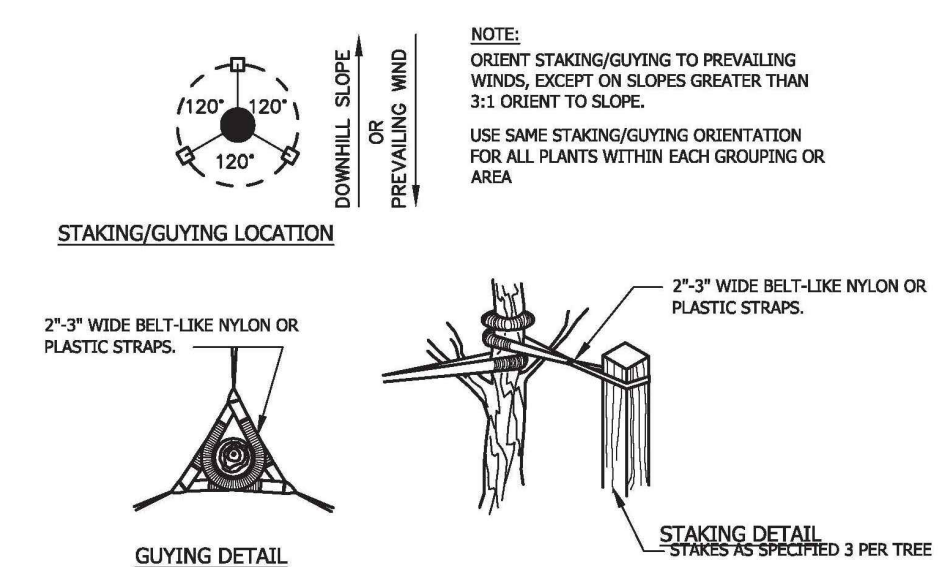
**EVERGREEN TREE PLANTING DETAIL**

NOT TO SCALE



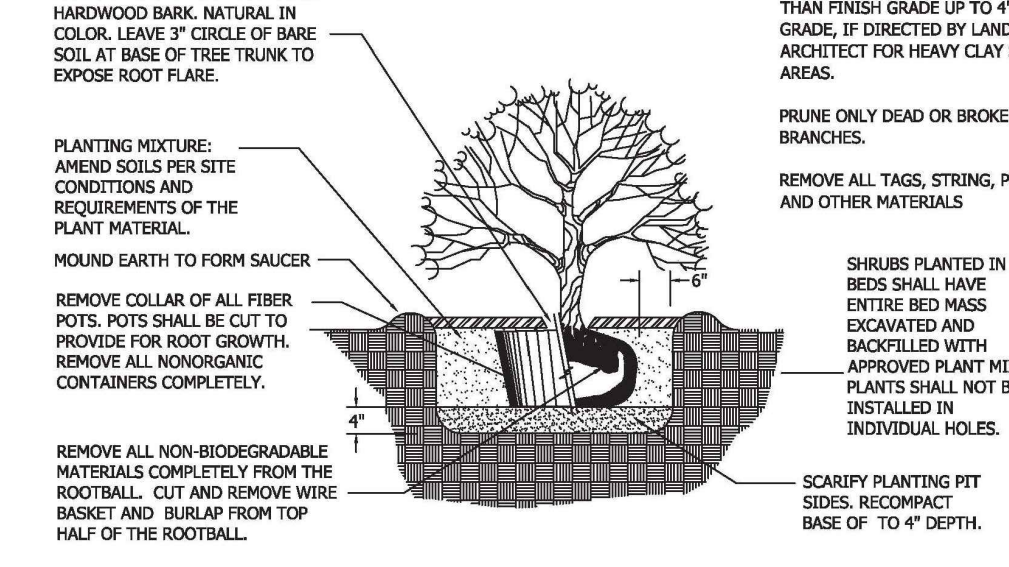
**DECIDUOUS TREE PLANTING DETAIL**

NOT TO SCALE



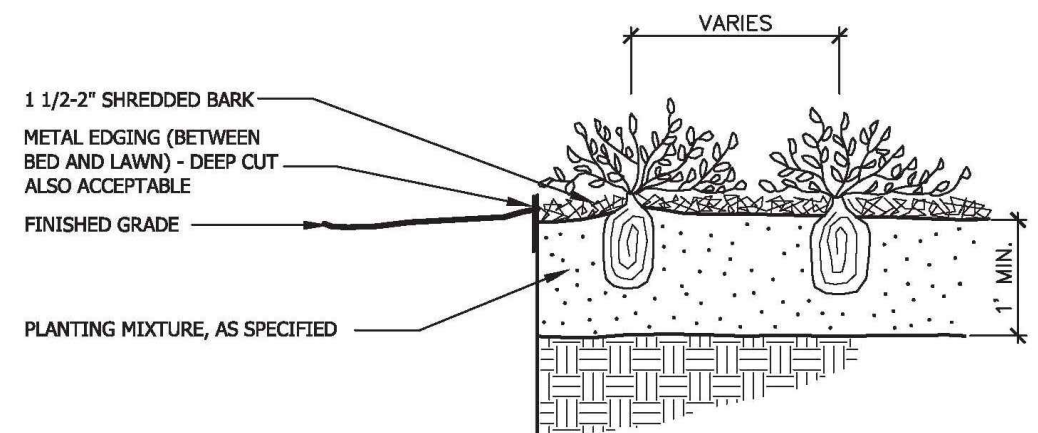
**TREE STAKING DETAIL**

NOT TO SCALE



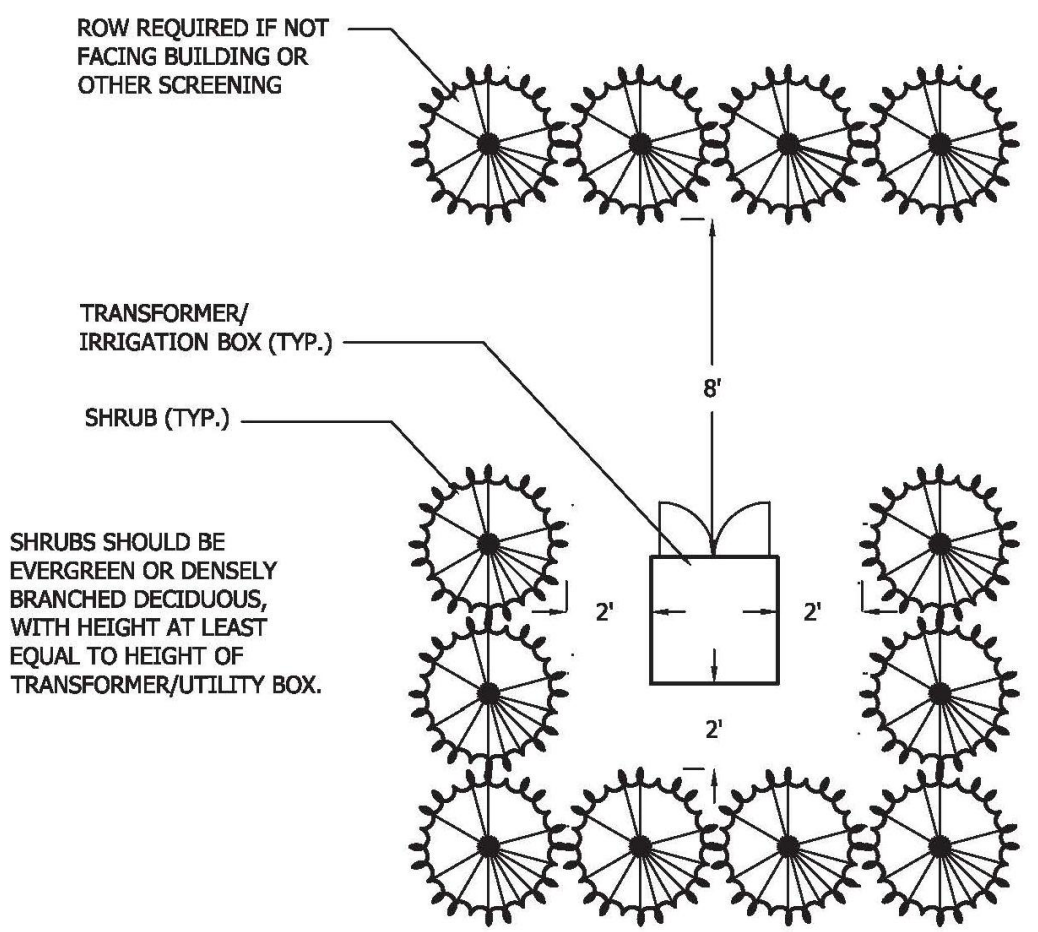
**DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL**

NOT TO SCALE



**GROUND COVER/PERENNIAL/ANNUAL PLANTING DETAIL**

NOT TO SCALE



**TRANSFORMER SCREENING DETAIL**

NOT TO SCALE

**GENERAL LANDSCAPING NOTES:**

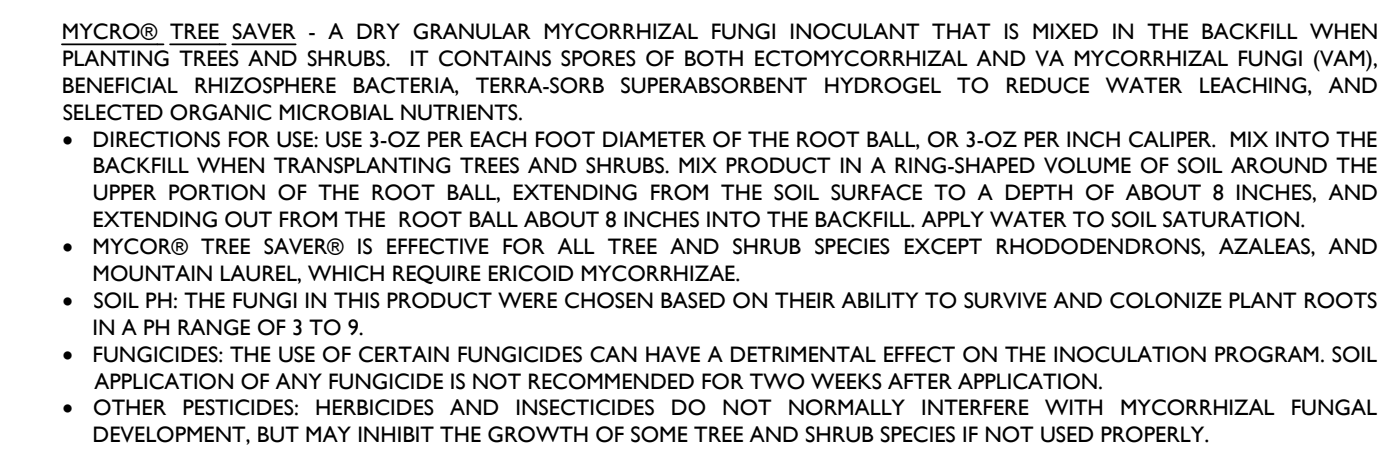
1. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THESE SPECIFICATIONS, APPROVED OR FINAL DRAWINGS, AND INSTRUCTIONS PROVIDED BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIALS, OR OWNER/OWNER'S REPRESENTATIVE. ALL WORK COMPLETED AND MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE INTENTION OF THE SPECIFICATIONS, DRAWINGS, AND INSTRUCTIONS AND EXECUTED WITH THE STANDARD LEVEL OF CARE FOR THE LANDSCAPE INDUSTRY.
2. WORK MUST BE CARRIED OUT ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO THE HEALTH AND WELFARE OF PLANTS. THE SUITABILITY OF SUCH WEATHER CONDITIONS SHALL BE DETERMINED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL.
3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR, BEFORE ORDERING OR PURCHASING MATERIALS, TO PROVIDE SAMPLES OF THOSE MATERIALS TO THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL FOR APPROVAL, IF SO REQUESTED.
4. IF SAMPLES ARE REQUESTED, THE LANDSCAPE CONTRACTOR IS TO SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS AND SEED VERIFYING TYPE AND PURITY.
5. UNLESS OTHERWISE AUTHORIZED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, THE LANDSCAPE CONTRACTOR SHALL PROVIDE NOTICE AT LEAST FORTY-EIGHT HOURS (48 HRS) IN ADVANCE OF THE ANTICIPATED DELIVERY DATE OF ANY PLANT MATERIALS TO THE PROJECT SITE. A LEGIBLE COPY OF THE INVOICE, SHOWING VARIETIES AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT SHALL BE FURNISHED TO THE PROJECT LANDSCAPE DESIGNER, OR GOVERNING MUNICIPAL OFFICIAL.
6. THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY PLACE.

**PROTECTION OF EXISTING VEGETATION NOTES:**

1. BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. FENCING SHALL BE LOCATED AS DEPICTED WITHIN THE APPROVED OR FINAL PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE. FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE PROTECTION FENCE DETAIL". NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FULFILLED. THE FENCING SHALL BE INSPECTED REGULARLY BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
2. IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE, EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT.
3. IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRAIN-LINE OF TREES TO REMAIN, THE WORK SHALL BE PERFORMED AS FOLLOWS:
  - TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT, BUT THE TRENCH SHALL BE TUNNELED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE.
  - RAISING GRADES: WHEN THE GRADE AT AN EXISTING TREE IS BELOW THE NEW FINISHED GRADE, AND FILL NOT EXCEEDING 6 INCHES (6") IS REQUIRED, CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES (18") AND FINISH APPROXIMATELY TWO INCHES (2") ABOVE THE FINISH GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNK OF ANY TREE REQUIRING FILL. WHERE FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID TREE WELL SHALL BE CONSTRUCTED. IF APPLICABLE, TREE WELL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL".
  - LOWERING GRADES: EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO MAINTAIN THE FINISHED GRADE AND TO MAINTAIN THE TREE TRUNK. WHERE CUT EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE RETAINING WALL DETAIL".

**SOIL PREPARATION AND MULCH NOTES:**

1. LANDSCAPE CONTRACTOR SHALL OBTAIN A SOIL TEST OF THE IN-SITU TOPSOIL BY A CERTIFIED SOIL LABORATORY PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL ALLOW FOR A TWO WEEK TURNAROUND TIME FROM SUBMITTAL OF SAMPLE TO NOTIFICATION OF RESULTS.
2. BASED ON SOIL TEST RESULTS, ADJUST THE RATES OF LIME AND FERTILIZER THAT SHALL BE MIXED INTO THE TOP SIX INCHES (6") OF TOPSOIL. THE LIME AND FERTILIZER RATES PROVIDED WITHIN THE "SEED SPECIFICATION" OR "SOD SPECIFICATION" IS APPROXIMATE AND FOR BIDDING PURPOSES ONLY. IF ADDITIONAL ADJUSTMENTS ARE NECESSARY, ADJUST THE TOPSOIL AS FOLLOWS:
  - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM.
  - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
3. TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMING CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, OBTAINED FROM A WELL-DRAINABLE ARABLE SITE, FREE FROM ALL CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIAL GREATER THAN ONE INCH (1").
4. TOPSOIL SHALL HAVE A PH RANGE OF 5.0-7.0 AND SHALL NOT CONTAIN LESS THAN 6% ORGANIC MATTER BY WEIGHT.
5. OBTAIN TOPSOIL ONLY FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT THE PROJECT SITE.
6. CONTRACTOR SHALL PROVIDE A SIX INCH (6") DEEP LAYER OF TOPSOIL IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN SOIL CONDITIONS.
7. UNLESS OTHERWISE NOTED IN THE CONTRACT, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF RE-GRADING WITHIN THE DISTURBED AREA OF THE SITE.
8. LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE ELEVATION MEETS THE FINISHED GRADE ELEVATION (LESS THE REQUIRED TOPSOIL), IN ACCORDANCE WITH THE APPROVED OR FINAL GRADING PLAN.
9. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THE APPROVED OR FINAL CONSTRUCTION SET UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO THE INSTALLATION OF PLANTINGS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO INSTALLATION. ALL PLANTING AND LAWN AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW A FREE FLOW OF SURFACE WATER.
11. DOUBLE SHREDDED HARDWOOD MULCH OR APPROVED EQUAL SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL SHRUB PLANTING BEDS AND AROUND ALL TREES PLANTED BY LANDSCAPE CONTRACTOR. GROUND COVER, PERENNIAL, AND ANNUAL PLANTING BEDS SHALL BE MULCHED WITH A TWO INCH (2") TOP DRESSING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO AVOID CONTACT WITH TRUNK OR PLANT STEM. MULCH SHALL BE OF SUFFICIENT CHARACTER AS NOT TO BE EASILY DISPLACED BY WIND OR WATER RUNOFF.
12. WHENEVER POSSIBLE, THE SOIL PREPARATION AREA SHALL BE CONNECTED FROM PLANTING TO PLANTING.
13. SOIL SHALL BE LOOSENED WITH A BACKHOE OR OTHER LARGE COARSE-TILLING EQUIPMENT UNLESS THE SOIL IS FROZEN OR EXCESSIVELY WET. TILLING THAT PRODUCES LARGE, COARSE CHUNKS OF SOIL IS PREFERABLE TO TILLING THAT RESULTS IN FINE GRAINS UNIFORM IN TEXTURE. AFTER THE AREA IS LOOSENED IT SHALL NOT BE DRIVEN OVER BY ANY VEHICLE.
14. APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL.
15. ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:
  - MYCORRHIZAL TREE SAVER - A DRY GRANULAR MYCORRHIZAL FUNGI INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM), BENEFICIAL RHIZOSPHERE BACTERIA, TERRA-SORB SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND SELECTED ORGANIC MICROBIAL NUTRIENTS.
  - DIRECTIONS FOR USE: USE 3-6 OZ PER EACH FOOT DIAMETER OF THE ROOT BALL OR 3-6 OZ PER INCH CALIPER. MIX INTO THE BACKFILL WHEN TRANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE UPPER PORTION OF THE ROOT BALL, EXTENDING FROM THE SOIL SURFACE TO A DEPTH OF ABOUT 8 INCHES, AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8 INCHES INTO THE BACKFILL. APPLY WATER TO THE SOIL SATURATION.
  - MYCORRHIZAL TREE SAVER IS EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND MOUNTAIN LAUREL, WHICH REQUIRE ERICOID MYCORRHIZAE.
  - SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS IN A PH RANGE OF 3 TO 9.
  - FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON THE INOCULATION PROGRAM. SOIL APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION.
  - OTHER PESTICIDES: HERBICIDES AND INSECTICIDES DO NOT NORMALLY INTERFERE WITH MYCORRHIZAL FUNGAL DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.



**TREE PROTECTION DETAIL**

NOT TO SCALE

**CITY OF NOVI GENERAL NOTES:**

1. ALL PLANT MATERIALS ARE TO BE INSTALLED IN A SOUND, WORKMAN-LIKE MANNER AND IN ACCORDANCE WITH THE CURRENT CITY OF NOVI PLANTING REQUIREMENTS.
2. ALL PLANT MATERIALS SHALL BE INSTALLED BETWEEN MARCH 15TH AND NOVEMBER 15TH.
3. ALL PLANT MATERIALS ARE TO BE NORTHERN NURSERY GROWN NO.1 GRADE AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES. ALL PLANT MATERIALS SHALL CONFORM TO THE CURRENT ANS STANDARDS FOR NURSERY STOCK. PERFORMANCE WITH THE CITY OF NOVI PLANTING DETAILS AND SPECIFICATIONS. THE CITY SHALL HAVE THE RIGHT TO INSPECT THE PLANT MATERIALS PRIOR TO PLANTING AND TO REJECT ANY PLANT MATERIALS DEEMED TO NOT MEET THE STANDARDS OF THE ZONING ORDINANCE.
4. ALL TREES SHALL HAVE A CENTRAL LEADER AND A RADIAL BRANCHING STRUCTURE. PARK GRADE TREES ARE NOT ACCEPTABLE. ALL TREES SHALL BE BALLED AND BURLAPPED (BBB).
5. ANY DECIDUOUS CANOPY TREES WITH BRANCHES THAT MIGHT TEND TO DEVELOP INTO "Y" CROTCHES SHALL BE SUBORDINATED SO AS NOT TO BECOME DOMINANT BRANCHES.
6. MULCH SHALL BE NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK FOR ALL PLANTINGS. 3" THICK FOR TREES IN 4-FOOT DIAMETER CIRCLE WITH 3" PULLED AWAY FROM TRUNK. 2" THICK FOR SHRUBS AND SHRUB BEDS AND 2" THICK BARK FOR PERENNIALS.
7. ALL PLANT MATERIAL SHALL BE WARRANTED FOR TWO (2) FULL YEARS AFTER DATE OF ACCEPTANCE BY THE CITY OF NOVI. ALL UNHEALTHY AND DEAD MATERIAL SHALL BE REPLACED WITHIN THREE (3) MONTHS OR THE NEXT APPROPRIATE PLANTING PERIOD AS DETERMINED BY THE CITY OF NOVI.
8. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION, INCLUDING WATERING, CULTIVATION, WEED CONTROL AND SOIL ENRICHMENTS AS MAY BE NECESSARY.

**TRANSFORMER SCREENING DETAIL**

NOT TO SCALE

**PLANT QUALITY AND HANDLING NOTES:**

1. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z601-2004) OR LATEST REVISION AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
2. IN ALL CASES, BOTANICAL NAMES LISTED WITHIN THE APPROVED OR FINAL PLAN SET SHALL TAKE PRECEDENCE OVER COMMON NAMES.
3. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY, EXCEPTIONALLY HEALTHY, TIGHTLY KNIT, SO TRAINED OR FAVORED IN THEIR DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL HAVE A NORMAL HABIT OR SOUND, HEALTHY, VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEM. PLANTS SHALL BE FREE OF DISEASE, INSECT FEEDS, EGGS OR LARVAE.
4. PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH ABRASION OF THE BARK, SUNSCALDS, DISFIGURING KNOTS OR FRESH CUTS OF LIMBS OVER ONE AND ONE-FOURTH INCHES (1-1/4") WHICH HAVE NOT COMPLETELY CALLOUSED SHALL BE REJECTED.
5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH AND BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE.
6. THE ROOT SYSTEM OF EACH PLANT SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY COATED WITHIN IN LEAF.
7. ALL PLANTS DESIGNATED BALL AND BURLAP (BB&B) MUST BE MOVED WITH THE ROOT SYSTEM AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH BURLAP. THE DIAMETER AND DEPTH OF THE BALLS OF EARTH MUST BE SUFFICIENT TO ENCOMPASS THE FIBROUS ROOT FEEDING SYSTEM NECESSARY FOR THE HEALTHY DEVELOPMENT OF THE PLANT. NO PLANT SHALL BE ACCEPTED WHEN THE BALL OF EARTH SURROUNDING ITS ROOTS HAS BEEN BADLY CRACKED OR BROKEN PREPARATORY TO OR DURING THE PROCESS OF PLANTING. THE BALLS SHALL REMAIN INTACT DURING ALL OPERATIONS. ALL PLANTS THAT CANNOT BE PLANTED AT ONCE MUST BE HELED-IN BY SETTING IN THE GROUND AND COVERING THE BALLS WITH SOIL OR MULCH AND THEN WATERING. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS USED, ALL TWINE IS TO BE CUT FROM AROUND THE TRUNK AND ALL BURLAP IS TO BE REMOVED.
8. PLANTS TRANSPORTED TO THE PROJECT IN OPEN VEHICLES SHALL BE COVERED WITH TARP OR OTHER SUITABLE COVERS SECURELY FASTENED TO THE BODY OF THE VEHICLE TO PREVENT INJURY TO THE PLANTS. CLOSED VEHICLES SHALL BE ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF THE PLANTS. EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DELIVERING, CARELESSNESS WHILE IN TRANSIT OR STORAGE SHALL BE CAUSE FOR REJECTION. PLANTS OF PLANT MATERIAL. ALL PLANTS SHALL BE KEPT MOIST, FRESH AND PROTECTED. SUCH PROTECTION SHALL ENCOMPASS THE ENTIRE PERIOD DURING WHICH THE PLANTS ARE IN TRANSIT, BEING HANDLED, OR ARE IN TEMPORARY STORAGE.
9. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CORRESPONDING LANDSCAPE PLAN AND PLANTING DETAILS.
10. LANDSCAPE CONTRACTOR SHALL MAKE BEST EFFORT TO INSTALL PLANTINGS ON THE SAME DAY AS DELIVERY. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN TO PLACE THE PLANTINGS IN PARTIAL SHADE WHEN POSSIBLE. THE ROOT BALL SHALL BE KEPT MOIST AT ALL TIMES AND COVERED WITH MOISTENED MULCH OR AGED WOODCHIPS. PROPER IRRIGATION SHALL BE SUPPLIED TO PLANTS TO PREVENT DRYING OUT. PLANTINGS SHALL BE UNTIED AND PROPER SPACING SHALL BE ALLOTTED FOR AIR CIRCULATION AND TO PREVENT DISEASE, WILTING, AND LEAF LOSS. PLANTS THAT REMAIN UNPLANTED FOR A PERIOD OF TIME GREATER THAN THREE (3) DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH AND WATERED AS REQUIRED TO PRESERVE ROOT MOISTURE.
11. NO PLANT MATERIAL SHALL BE PLANTED IN MUDDY OR FROZEN SOIL.
12. PLANTS WITH INJURED ROOTS OR BRANCHES SHALL BE PRUNED PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY DAMAGED OR INJURED PLANTS SHALL BE REMOVED.
13. IF ROCK OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO RELOCATE OR ENLARGE PLANTING PITS OR DELETE PLANT MATERIAL FROM THE CONTRACT.
14. IF PLANTS ARE PROPOSED WITHIN SIGHT TRIANGLES, TREES SHALL BE LIMBED AND MAINTAINED TO A HEIGHT OF EIGHT FEET (8) ABOVE GRADE, AND SHRUBS, GROUND COVER, PERENNIALS, AND ANNUALS SHALL BE MAINTAINED TO A HEIGHT NOT TO EXCEED TWO FEET (2) ABOVE GRADE UNLESS OTHERWISE NOTED OR SPECIFIED BY THE GOVERNING MUNICIPALITY OR AGENCY.
15. INSTALLATION SHALL OCCUR DURING THE FOLLOWING SEASONS:
  - PLANTS (MARCH 15 - NOVEMBER 15)
  - LAWNS (MARCH 15 - JUNE 15 OR SEPTEMBER 1 - DECEMBER 1)
16. THE FOLLOWING TREES ARE SUSCEPTIBLE TO TRANSPORT SHOCK AND SHALL NOT BE PLANTED DURING THE FALL SEASON (STARTING SEPTEMBER 15):
 

ABIES CONCOLOR	CORNUS VARIETIES	OSTRYA VIRGINIANA
ACER BUEBERIANUM	CRATAEGUS VARIETIES	PINUS NIGRA
ACER FREEMANII VARIETIES	CUPRESSOCYPERUS LEYLANDII	PLATANUS VARIETIES
ACER RUBRUM	FAGUS VARIETIES	PORULUS VARIETIES
ACER SACCHARINUM	HALESIA VARIETIES	PRUNUS VARIETIES
BETULA VARIETIES	ILEX X FOESTERII	PRUNUS VARIETIES
CARPINUS VARIETIES	ILEX NELLE STEVENS	QUERCUS VARIETIES (NOT Q. PALUSTRIS)
CEDRUS DEODARA	ILEX OPACA	SALIX WEeping VARIETIES
JUNIPERUS VARIETIES	JUNIPERUS VIRGINIANA	SORBUS VARIETIES
CERDIPHYLLUM VARIETIES	KOELFUETERIA PANICULATA	TAXODIUM VARIETIES
LIQUIDAMBAR VARIETIES	LIQUIDAMBAR VARIETIES	TAXUS B REPANDENS
CORNUS VARIETIES	LIRIODENDRON VARIETIES	TILIA TOMENTOSA VARIETIES
CRATAEGUS VARIETIES	MALUS IN LEAF	ULMUS PARVIFOLIA VARIETIES
	NYSSA SYLVATICA	ZELKOVIA VARIETIES
17. IF A PROPOSED PLANT IS UNAVAILABLE OR ON THE FALL DIGGING HAZARD LIST, AN EQUIVALENT SPECIES OF THE SAME SIZE MAY BE REQUESTED FOR SUBSTITUTION OF THE ORIGINAL PLANT. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT LANDSCAPE DESIGNER AND CITY LANDSCAPE ARCHITECT PRIOR TO ORDERING AND INSTALLATION.
18. DURING THE COURSE OF CONSTRUCTION/PLANT INSTALLATION, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY REMOVED AND PROMPTLY REMOVED AT THE END OF EACH WORK DAY. ALL DEBRIS, MATERIALS, AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF AND ALL PAVED AREAS SHALL BE CLEANED.
19. THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF ALL RUBBISH AND EXCESS SOIL AT HIS EXPENSE TO AN OFF-SITE LOCATION AS APPROVED BY THE LOCAL MUNICIPALITY.
20. PLANT MATERIAL MUST BE GUARANTEED FOR A PERIOD OF 2 YEARS DURING THE MAINTENANCE PERIOD AND SHALL BEGIN IMMEDIATELY AFTER ALL PLANTS HAVE BEEN SATISFACTORILY INSTALLED.
21. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUY WIRES ORIGINALLY REQUIRED, WATERING WHEN NEEDED OR DIRECTED, WEEDING, PRUNING, SPRAYING, FERTILIZING, MOWING THE LAWN, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
22. MOW ALL GRASS AREAS AT REGULAR INTERVALS TO KEEP THE GRASS HEIGHT FROM EXCEEDING THREE INCHES (3"). MOWING SHALL BE PERFORMED ONLY WHEN GRASS IS DRY. MOWER BLADE SHALL BE SET TO REMOVE NO MORE THAN ONE THIRD (1/3) OF THE GRASS LENGTH. WHEN THE AMOUNT OF GRASS IS HEAVY, IT SHALL BE REMOVED TO PREVENT DESTRUCTION OF THE UNDERLYING TURF. MOW GRASS AREAS IN SUCH A MANNER AS TO PREVENT CLIPPINGS FROM BLOWING ON PAVED AREAS AND SIDEWALKS. CLEANUP AFTER MOWING SHALL INCLUDE SWEEPING OR BLOWING OF PAVED AREAS AND SIDEWALKS TO CLEAR THEM FROM MOWING DEBRIS.
23. GRASSED AREAS DAMAGED DURING THE PROCESS OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE DISTURBED AREAS TO A CONDITION SATISFACTORY TO THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE. THIS MAY INCLUDE FILLING TO GRADE, FERTILIZING, SEEDING, AND MULCHING.
24. SHOULD THE OWNER REQUIRE MAINTENANCE BEYOND THE STANDARD 90-DAY MAINTENANCE PERIOD, A SEPARATE CONTRACT SHALL BE ESTABLISHED.
25. LANDSCAPE CONTRACTOR SHALL WATER NEW PLANTINGS FROM TIME OF INSTALL AND THROUGHOUT REQUIRED 90-DAY MAINTENANCE PERIOD UNTIL PLANTS ARE ESTABLISHED. IF ON-SITE WATER IS NOT AVAILABLE AT THE PROJECT LOCATION, THE LANDSCAPE CONTRACTOR SHALL FURNISH IT BY MEANS OR A WATERING TRUCK OR OTHER ACCEPTABLE MANNER.
26. THE QUANTITY OF WATER APPLIED AT ONE TIME SHALL BE SUFFICIENT TO PENETRATE THE SOIL TO A MINIMUM OF EIGHT INCHES (8") IN SHRUB BEDS AND SIX INCHES (6") IN TURF AREAS AT A RATE WHICH WILL PREVENT SATURATION OF THE SOIL.
27. IF AN AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED, IT CAN BE USED FOR WATERING PLANT MATERIAL. HOWEVER, FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY OF PLANT HEALTH AND ESTABLISHMENT.

**PLANT MATERIAL GUARANTEE NOTES:**

1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWO YEARS (2 YR) FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE.
2. THE LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE DYING, DEAD, OR DEFECTIVE PLANT MATERIAL AT HIS EXPENSE.
3. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS COMPANY'S OPERATIONS.
4. ALL REPLACEMENT PLANTS SHALL BE OF THE SAME SPECIES AND SIZE AS SPECIFIED ON THE APPROVED OR FINAL PLANT LIST. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTALLMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
5. THE CONTRACTOR SHALL INSTRUCT THE OWNER AS TO THE PROPER CARE AND MAINTENANCE OF ALL PLANTINGS.

**LAWN (SEED OR SOD) NOTES:**

1. SEED MIXTURE SHALL BE FRESH, CLEAN, NEW CROP SEED. SOD SHALL BE STRONGLY ROOTED, UNIFORM IN THICKNESS, AND FREE OF WEEDS, DISEASE, AND PESTS.
2. SEED OR SOD SHALL BE PURCHASED FROM A RECOGNIZED DISTRIBUTOR AND SHALL BE COMPOSED OF THE MIX OR BLEND WITHIN THE PROVIDED "SEED SPECIFICATION" OR "SOD SPECIFICATION."
3. REFERENCE LANDSCAPE PLAN FOR AREAS TO BE SEED OR LAID WITH SOD.
4. SEEDING SHALL NOT BE PERFORMED IN WINDY WEATHER. IF THE SEASON OF THE PROJECT COMPLETION PROHIBITS PERMANENT STABILIZATION, TEMPORARY STABILIZATION SHALL BE PROVIDED IN ACCORDANCE WITH THE "TEMPORARY SEEDING SPECIFICATION."
5. PROTECT NEW LAWN AREAS AGAINST TRESPASSING WHILE THE SEED IS GERMINATING. FURNISH AND INSTALL FENCES, SIGNS, BARRIERS OR ANY OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. DAMAGE RESULTING FROM TRESPASS, EROSION, SETTLEMENT, OR OTHER CAUSES SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT HIS EXPENSE. REMOVE ALL FENCES, SIGNS, BARRIERS OR OTHER TEMPORARY PROTECTIVE DEVICES ONCE LAWN HAS BEEN ESTABLISHED.

**CITY OF NOVI NONLIVING DURABLE MATERIAL NOTES:**

- NONLIVING DURABLE MATERIAL**
1. MULCH FOR ALL PLANTINGS SHALL BE PREMIUM SHREDDED HARDWOOD AND SHALL NOT BE ARTIFICIALLY COLORED. NO CYPRESS WOOD MULCH OR RUBBER MULCH ARE TO BE USED.
  2. TREES SHALL BE MULCHED TO A 3 INCHES OVERALL DEPTH AT PLANTING.
  3. SHRUBS, GROUNDCOVERS AND PERENNIALS SHALL BE MULCHED TO A 2 INCHES OVERALL DEPTH AT PLANTING.
  4. ALL LAWN TREES SHALL BE PLANTED WITH A 4 FOOT DIAMETER CIRCLE OF THE SHREDDED HARDWOOD BARK MULCH.
  5. MULCH SHALL BE PULLED BACK 3 INCHES FROM THE TREE TRUNK IN A CIRCLE DOWN TO THE ROOT BALL DIRT TO EXPOSE THE ROOT COLLAR TO AIR. NO "VOLCANO" MULCHING IS ALLOWED AT PLANTING OR IN FUTURE APPLICATIONS OF MULCH. IF A ROOTBALL'S DIRT IS LIFTED UP ON THE TRUNK, IT SHOULD BE REMOVED TO EXPOSE THE ROOT FLARE.
  6. FOR FIRE SAFETY, SHREDDED HARDWOOD BARK IS NOT TO BE INSTALLED ADJACENT TO OR WITHIN 4 FEET OF BUILDINGS THAT ARE CONSTRUCTED OF COMBUSTIBLE MATERIALS. PLANTINGS ADJACENT TO COMBUSTIBLE BUILDINGS SHALL BE MULCHED WITH A NON-COMBUSTIBLE MATERIAL. TYPICALLY MARKETED AS LANDSCAPE MULCH. THE COLOR OF SUCH MATERIALS SHALL BE NATURAL AND COMPATIBLE WITH THE BUILDING.
  8. GRAVEL TYPE MULCHES ARE NOT PERMITTED ADJACENT TO PAVED PARKING LOTS OR ROADWAYS. APPROVAL OF TYPE, DEPTH AND SPECIFIC LOCATION FOR GRAVEL MULCH IS TO BE APPROVED BY THE CITY.
  9. SPAGNUM PEAT/BOG PEAT IS HARVESTED FROM FUNCTIONING WETLANDS SO IT SHALL NOT BE USED FOR LANDSCAPE PURPOSES. COMPOST MAY BE USED AS AN ALTERNATIVE.

REVISION FOR PRELIMINARY SITE PLAN APPROVAL	07/19/2023	NB	DATE	BY
PRELIMINARY SITE PLAN APPROVAL	05/27/2023	NB	DATE	BY
DESCRIPTION				

NOT APPROVED FOR CONSTRUCTION

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**PET RESORT NOVI**

PROPOSED PET BOARDING FACILITY

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SCALE: AS SHOWN PROJECT ID: DET-230040

TITLE: LANDSCAPING DETAILS

DRAWING: **C-9**

J. REID COOKSEY, P.E.  
MICHIGAN LICENSE No. 6201069428  
LICENSED PROFESSIONAL ENGINEER

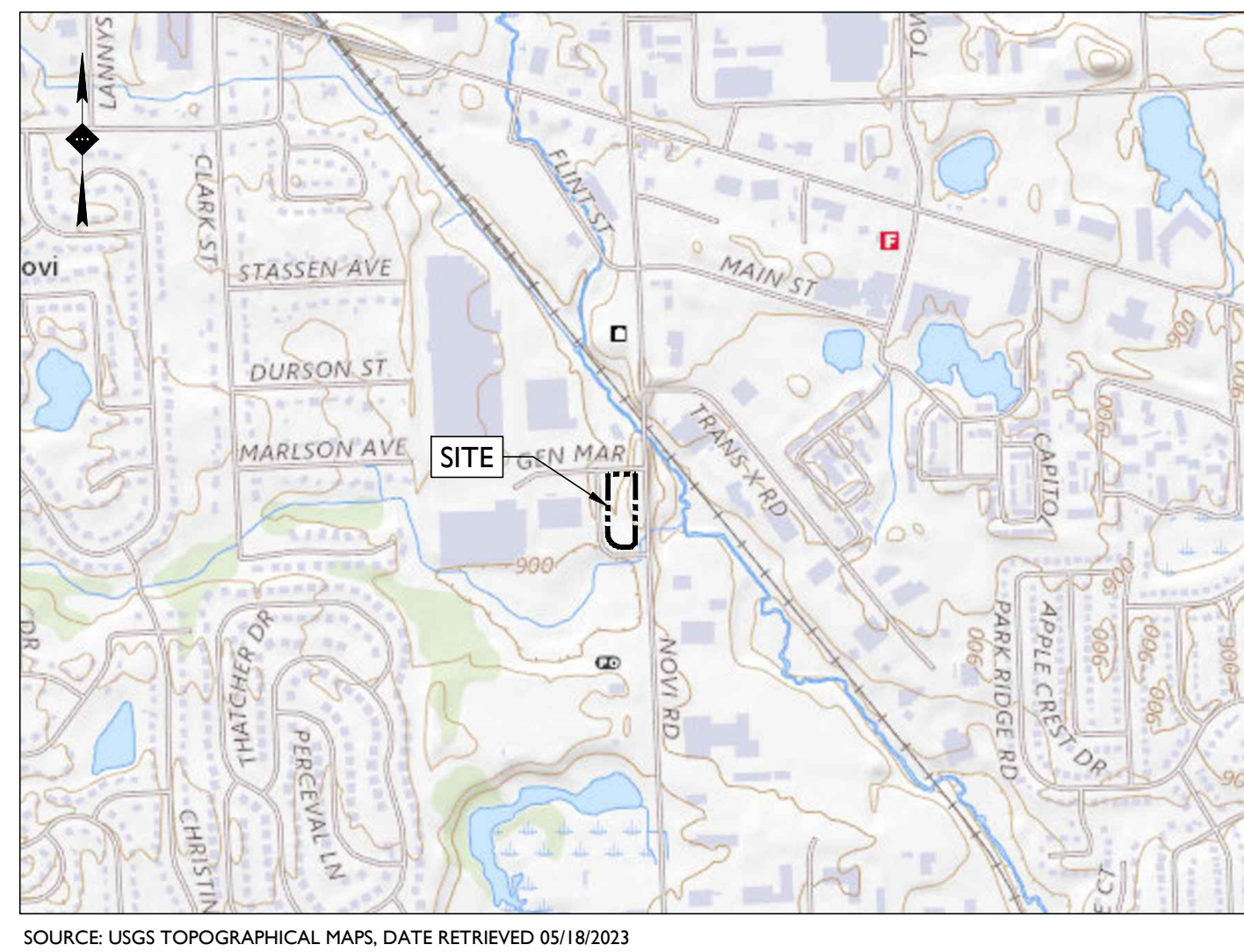
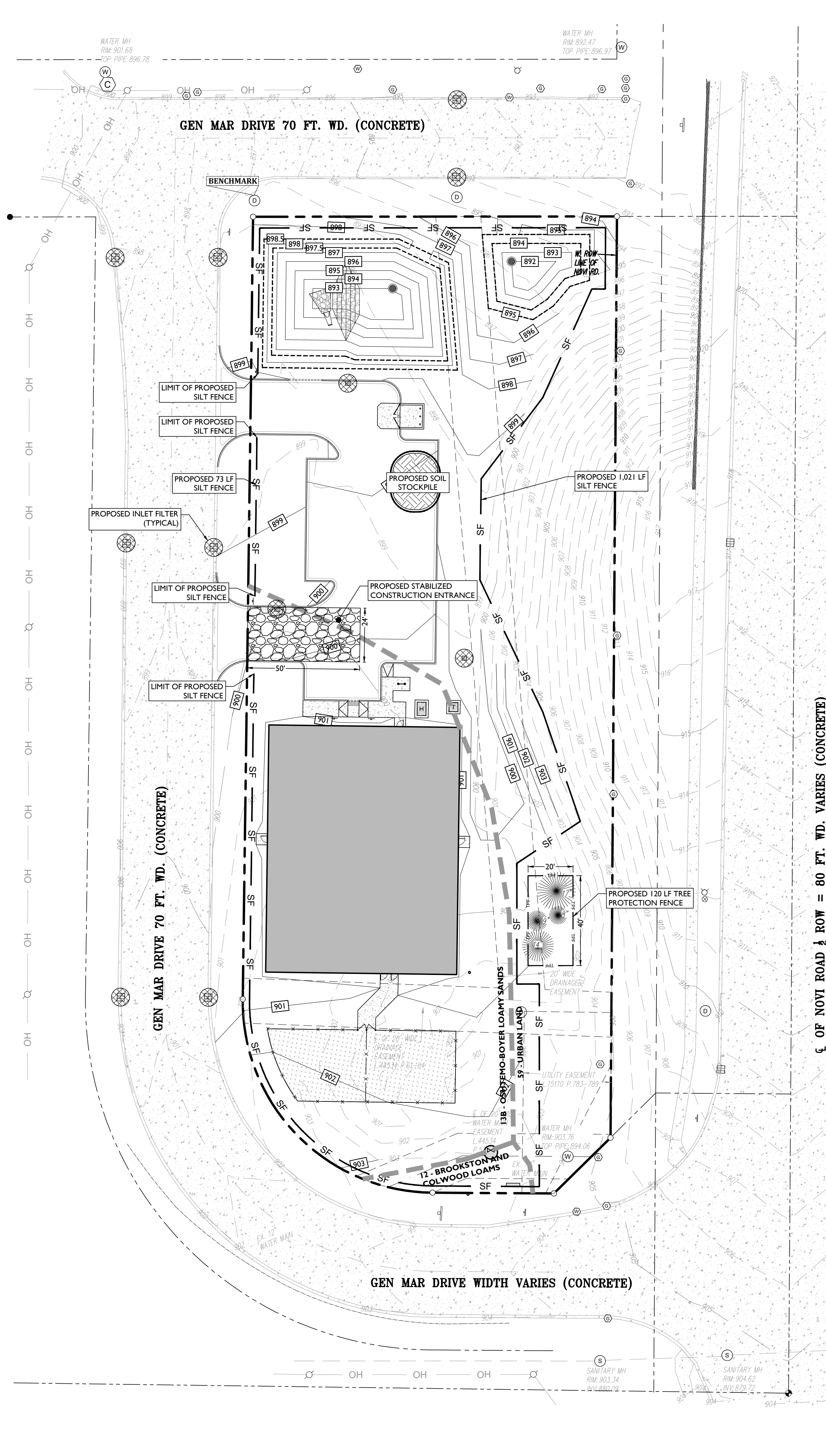
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SCALE: AS SHOWN PROJECT ID: DET-230040

TITLE: LANDSCAPING DETAILS

DRAWING: **C-9**



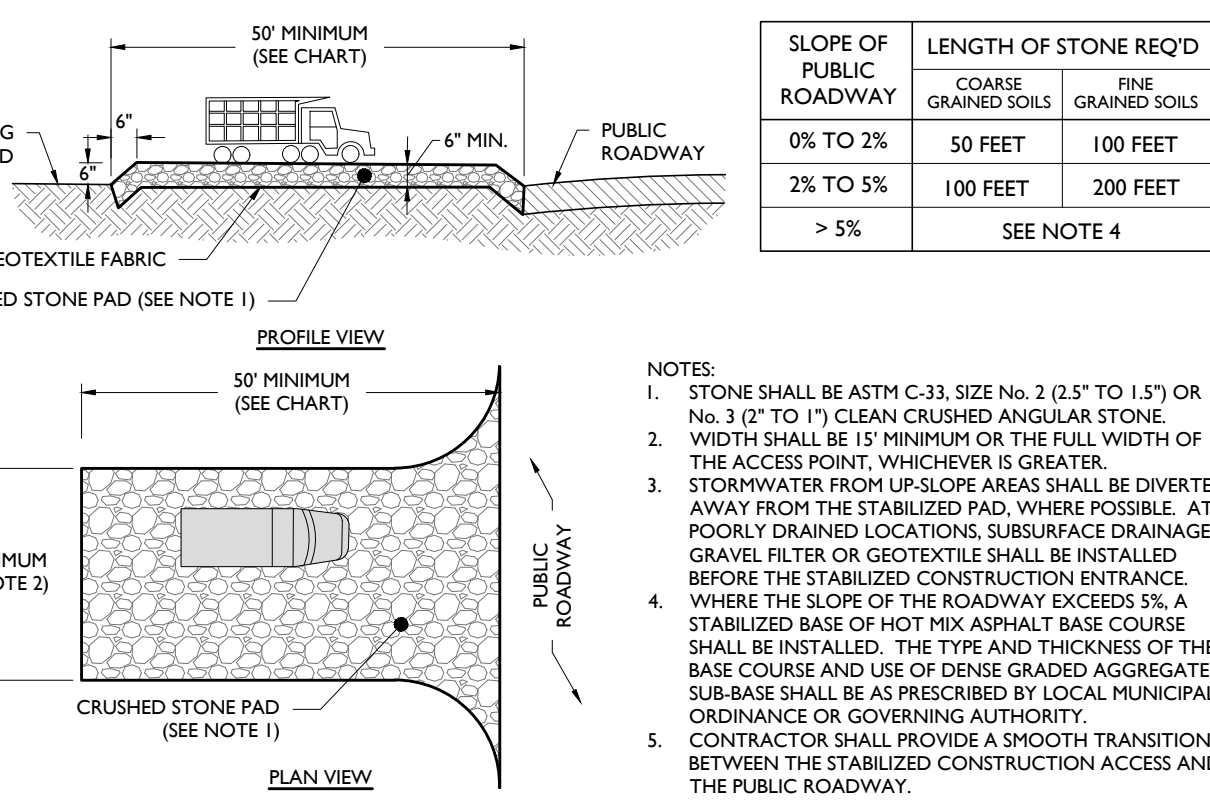


### LOCATION MAP

SCALE: 1" = 1000'±

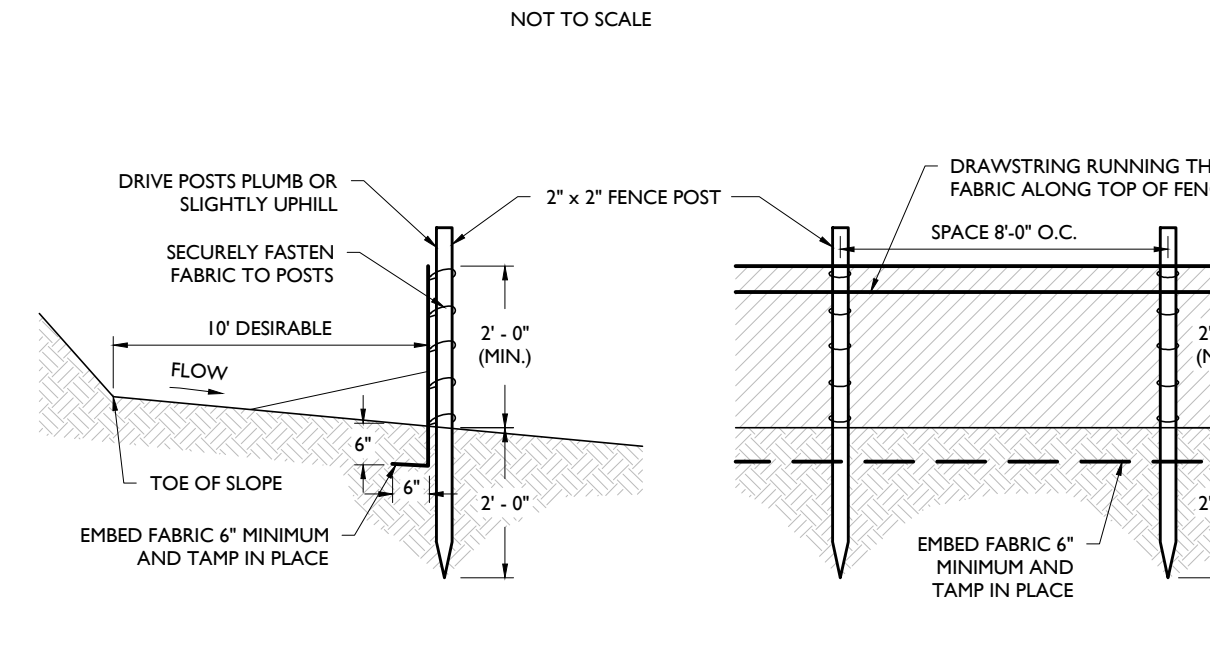
#### LEGAL DESCRIPTION

PARCEL ID# 22-22-276-017  
 A PARCEL OF LAND BEING PART OF THE NORTHEAST 1/4 OF SECTION 22, OF TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN BEING MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE EAST 1/4 CORNER OF SAID SECTION 22; THENCE NORTH 00 DEGREES 23 MINUTES 56 SECONDS EAST 523.79 FEET ALONG THE EAST LINE OF SAID SECTION 22, SAID LINE ALSO BEING CENTERLINE OF NOVI ROAD (1/4 RIGHT OF WAY = 80 FEET); THENCE SOUTH 89 DEGREES 56 MINUTES 56 SECONDS WEST 80.00 FEET TO THE WESTERLY RIGHT OF WAY LINE OF SAID NOVI ROAD AND THE POINT OF BEGINNING; THENCE SOUTH 00 DEGREES 23 MINUTES 56 SECONDS WEST 409.99 FEET ALONG THE WESTERLY RIGHT OF WAY TO A POINT ON THE RIGHT OF WAY LINE GEN MAR DRIVE (VARIABLE WIDTH); THENCE ALONG SAID RIGHT OF WAY LINE THE FOLLOWING CURVE (S) CALLS: (1) SOUTH 45 DEGREES 23 MINUTES 18 SECONDS WEST 35.36 FEET, (2) NORTH 89 DEGREES 37 MINUTES 21 SECONDS WEST 53.99 FEET, (3) 134.08 FEET ALONG THE ARC OF THE CURVE TO THE RIGHT, HAVING A RADIUS 85.00 FEET, CENTRAL ANGLE OF 90 DEGREES 22 MINUTES 43 SECONDS, A CHORD BEARING NORTH 44 DEGREES 25 MINUTES 59 SECONDS WEST 120.60 FEET, (4) NORTH 00 DEGREES 45 MINUTES 22 SECONDS EAST 348.22 FEET, (5) NORTH 89 DEGREES 56 MINUTES 56 SECONDS EAST 161.85 FEET TO THE POINT OF BEGINNING, CONTAINING 1.58 ACRES OF LAND MORE OR LESS. ALSO SUBJECT TO ANY OTHER EASEMENTS OR RESTRICTIONS OF USE OR RECORD.



#### STABILIZED CONSTRUCTION ACCESS DETAIL

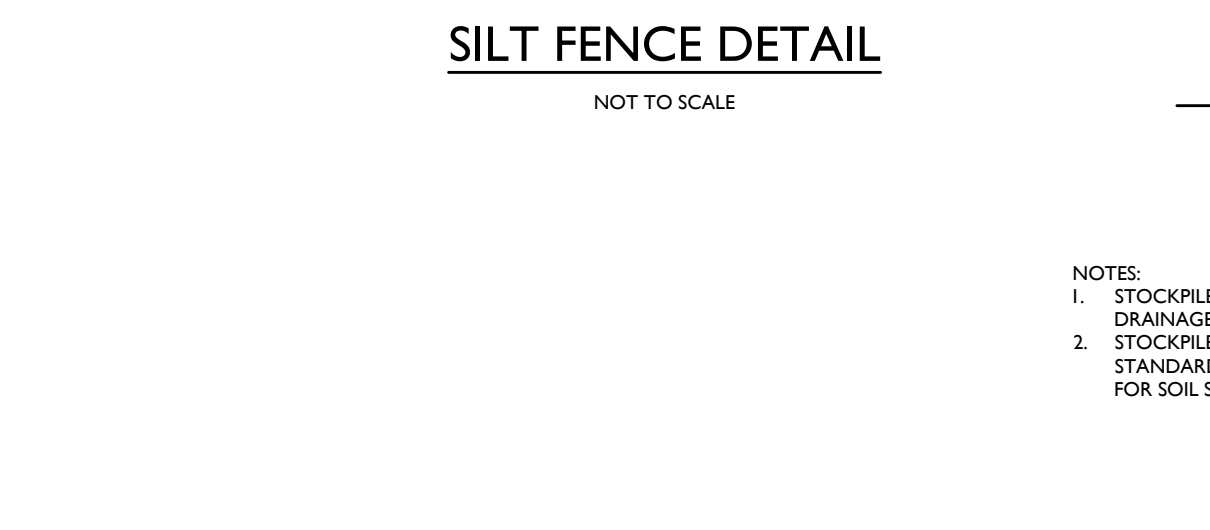
NOT TO SCALE



NOTES:  
 1. SECURELY FASTEN GEOTEXTILE TO FENCE POST BY USE OF WIRE TIES, HOG RINGS, STAPLES OR POCKETS. FOUR TO SIX FASTENERS PER POST.  
 2. GEOTEXTILE FABRIC TO BE EMBEDDED 6" (MIN) AND TAMP IN PLACE.  
 3. SECURELY FASTEN ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE TO A POST BY WRAPPING EACH END OF THE GEOTEXTILE AROUND THE POST TWICE AND ATTACHING AS SPECIFIED IN NOTE 1 ABOVE. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.  
 4. SET SILT FENCE WITHIN PROJECT LIMITS. 10'-0" IS DESIRABLE.

#### SILT FENCE DETAIL

NOT TO SCALE



NOTES:  
 1. STOCKPILES SHALL BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.  
 2. STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH THE STANDARDS FOR PERMANENT OR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, AS APPROPRIATE (SEE SOIL EROSION NOTES).

#### SOIL STOCKPILE DETAIL

NOT TO SCALE

#### SOIL CHARACTERISTICS CHART

TYPE OF SOIL	BROOKSTON AND COLWOOD LAOMS
PERCENT OF SITE COVERAGE	5.2%
HYDROLOGIC SOIL GROUP	B/C/D
DEPTH TO RESTRICTIVE LAYER	> 80 INCHES
SOIL PERMEABILITY	0.20 TO 1.98 IN / HR
DEPTH TO WATER TABLE	ABOUT 0 INCHES

#### SOIL CHARACTERISTICS CHART

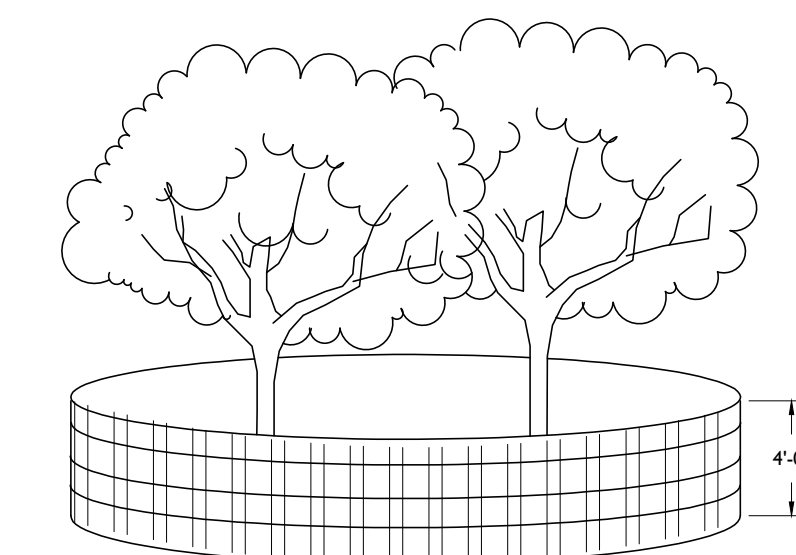
TYPE OF SOIL	OSHTEMO-BOYER LOAMY SANDS
PERCENT OF SITE COVERAGE	24.8%
HYDROLOGIC SOIL GROUP	A
DEPTH TO RESTRICTIVE LAYER	> 80 INCHES
SOIL PERMEABILITY	1.98 TO 5.95 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES

#### SOIL CHARACTERISTICS CHART

TYPE OF SOIL	URBAN LAND
PERCENT OF SITE COVERAGE	69.8%
HYDROLOGIC SOIL GROUP	C
DEPTH TO RESTRICTIVE LAYER	20 TO 36 INCHES
SOIL PERMEABILITY	0.06 TO 0.20 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES

#### BENCHMARK:

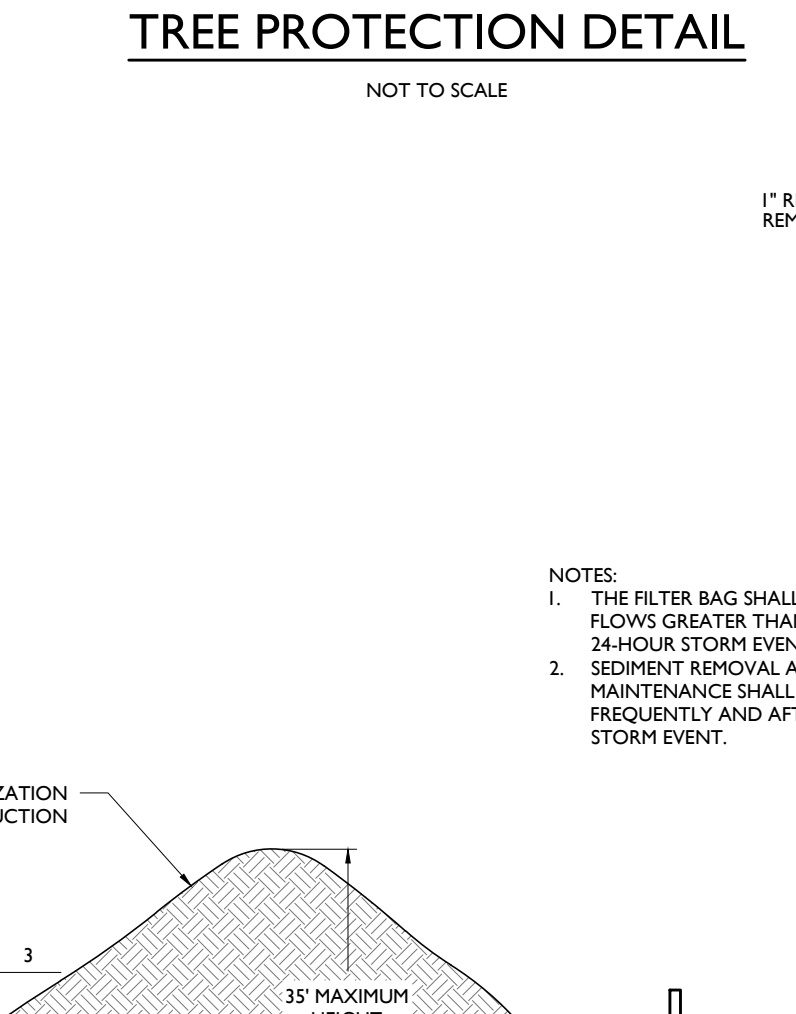
CITY OF NOVI #2311  
 "X" ON NORTH RIM OF SANITARY MANHOLE LOCATED ACROSS FROM INTERSECTION OF GEN-MAR AND NOVI ROAD, 45 EAST OF CENTERLINE OF NOVI ROAD AND 80 FEET NORTH OF CENTERLINE OF GEN-MAR.  
 ELEVATION = 892.08980 NAVD88  
 ON-SITE  
 THE NORTH RIM OF STORM MANHOLE LOCATED 7 FEET NORTH AND 1 FEET FROM THE NORTHWESTERLY MOST PROPERTY CORNER.  
 ELEVATION = 897.57 NAVD88



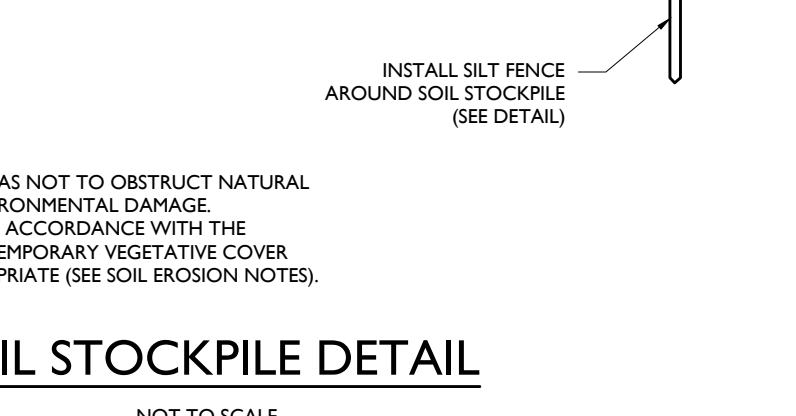
NOTES:  
 1. SNOW FENCING IS TO BE 4'-0" HIGH AND SELF SUPPORTED.  
 2. DO NOT STOCKPILE MATERIALS OR STORE EQUIPMENT WITHIN THE TREE PROTECTION FENCING.  
 3. SNOW FENCE TO BE INSTALLED AT DRIP LINE OF EXISTING TREE OR TREE CLUSTER TO BE PROTECTED OR NO CLOSER THAN 6" FROM TREE TRUNK IF NECESSARY.  
 4. IF THE PROJECT AREA ENCOMPASSES A PORTION OF THE DRIP LINE OF THE TREE, NO MORE THAN ONE THIRD OF THE OF THE TOTAL AREA OF WITHIN THE DRIP LINE SHOULD BE DISTURBED BY CONSTRUCTION OR REGRADING AND A 3" THICK LAYER OF MULCH SHALL BE INSTALLED OVER THE AREA OF THE DRIP LINE WHICH IS NOT PROTECTED BY FENCING TO PROVIDE A CUSHION.

#### TREE PROTECTION DETAIL

NOT TO SCALE

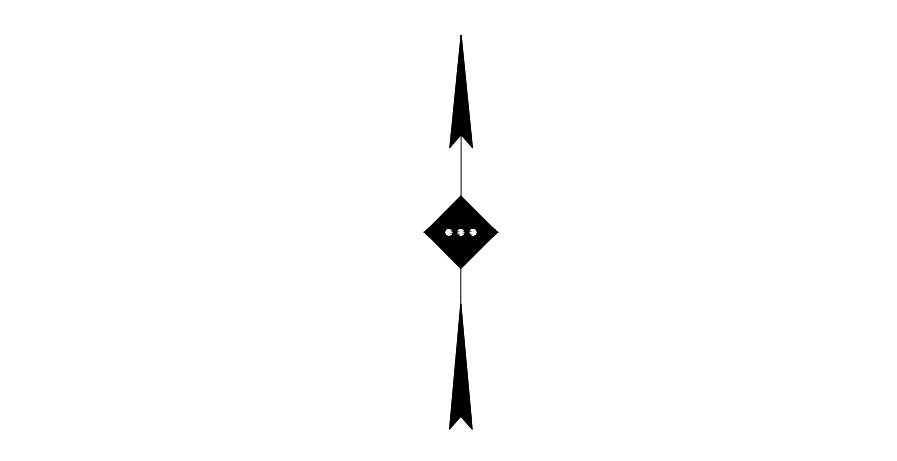


NOTES:  
 1. THE FILTER BAG SHALL SAFELY PASS THROUGH GREATER THAN THE 1-YEAR 24-HOUR STORM EVENT.  
 2. SEDIMENT REMOVAL AND MAINTENANCE SHALL BE PERFORMED FREQUENTLY AND AFTER EVERY STORM EVENT.



#### SOIL STOCKPILE DETAIL

NOT TO SCALE



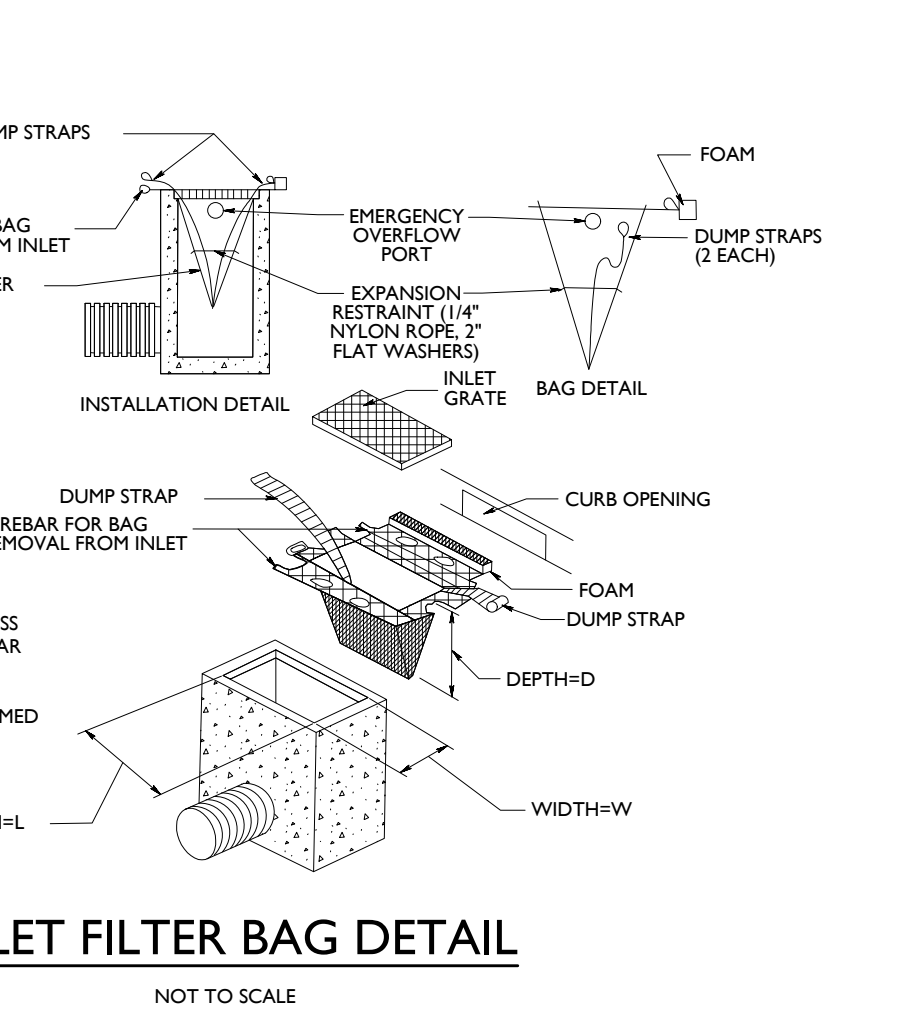
#### SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL AIR QUALITY STANDARDS.
3. THE CONTRACTOR IS RESPONSIBLE TO INSPECT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER A PRECIPITATION EVENT GREATER THAN 1 INCH. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG ON SITE AND DOCUMENT CORRECTIVE ACTION TAKEN THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED.

#### SEQUENCE OF CONSTRUCTION

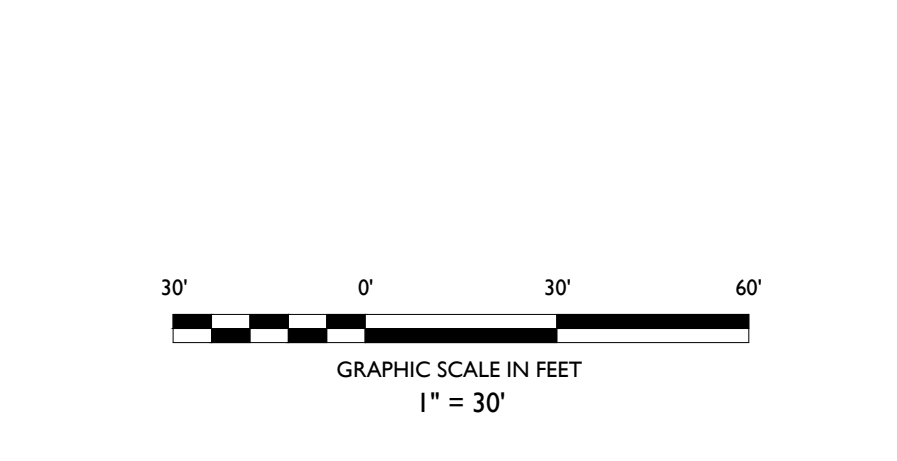
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SOIL EROSION AND SEDIMENTATION CONTROL MEASURES (5 DAYS)
2. ROUGH GRADING AND TEMPORARY SEEDING (10 DAYS)
3. EXCAVATE AND INSTALL UNDERGROUND UTILITIES, DRAINAGE PIPING, AND INLETS (15 DAYS)
4. BUILDING CONSTRUCTION AND SITE IMPROVEMENTS (60 DAYS)
5. LANDSCAPING IMPROVEMENTS AND FINAL SEEDING (7 DAYS)
6. REMOVE SOIL EROSION MEASURES (1 DAY)

NOTE:  
 TIME DURATIONS ARE APPROXIMATE AND ARE INTENDED TO ACT AS A GENERAL GUIDE TO THE CONSTRUCTION TIMELINE. ALL DURATIONS ARE SUBJECT TO CHANGE BY CONTRACTOR. CONTRACTOR SHALL SUBMIT CONSTRUCTION SCHEDULE TO CITY AND ENGINEER. CONTRACTOR SHALL PHASE CONSTRUCTION ACCORDINGLY.



#### INLET FILTER BAG DETAIL

NOT TO SCALE



NO.	DATE	ISSUE	BY	DESCRIPTION
2	07/19/2023	NB		RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL
1	05/23/2023	NB		PRELIMINARY SITE PLAN APPROVAL

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## PET RESORT NOVI

### PROPOSED PET BOARDING FACILITY

SITE DEVELOPMENT PLANS

DET-22-22-276-017  
 NOVI ROAD AND GEN MAR  
 CITY OF NOVI  
 OAKLAND COUNTY, MICHIGAN

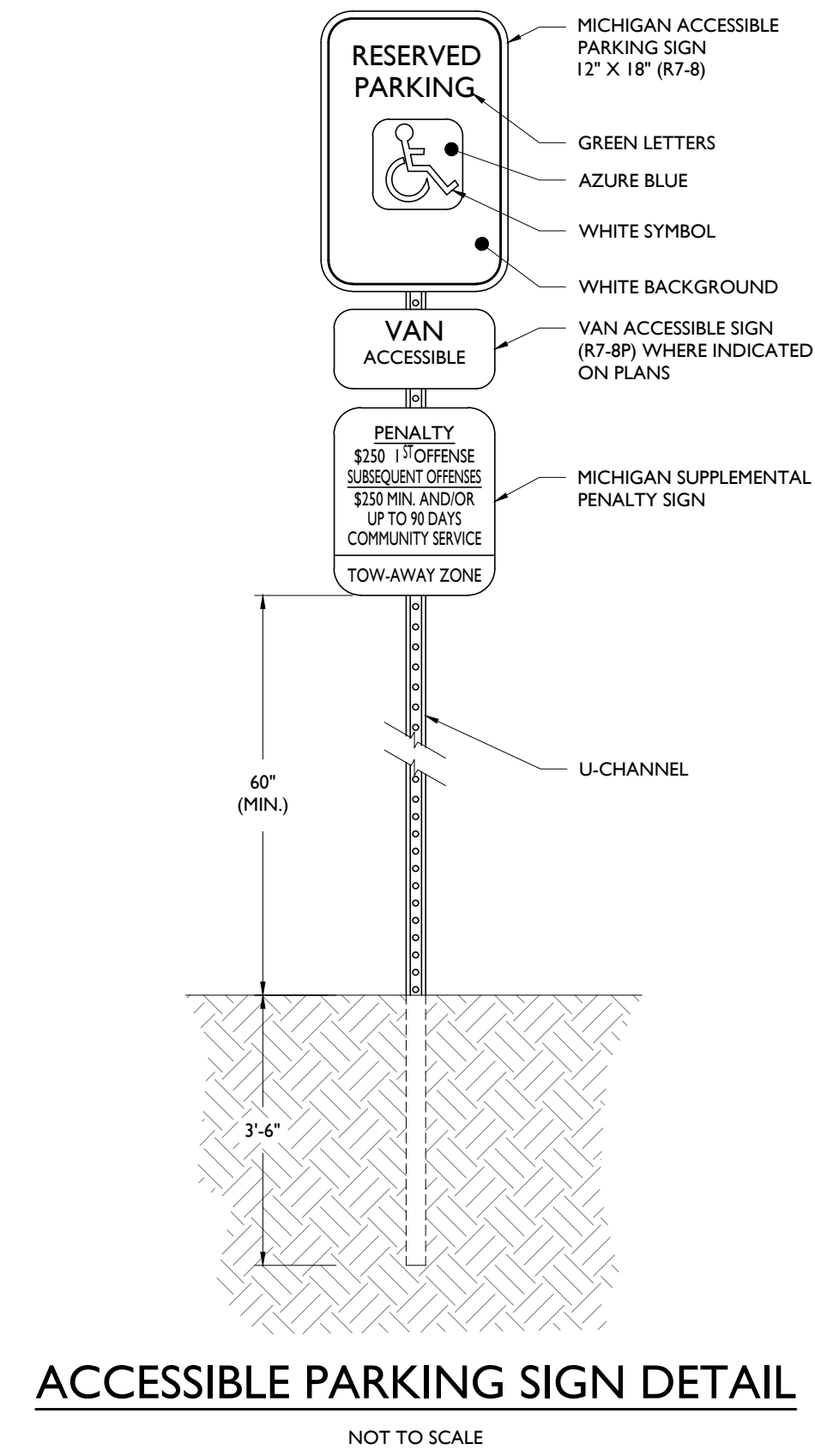
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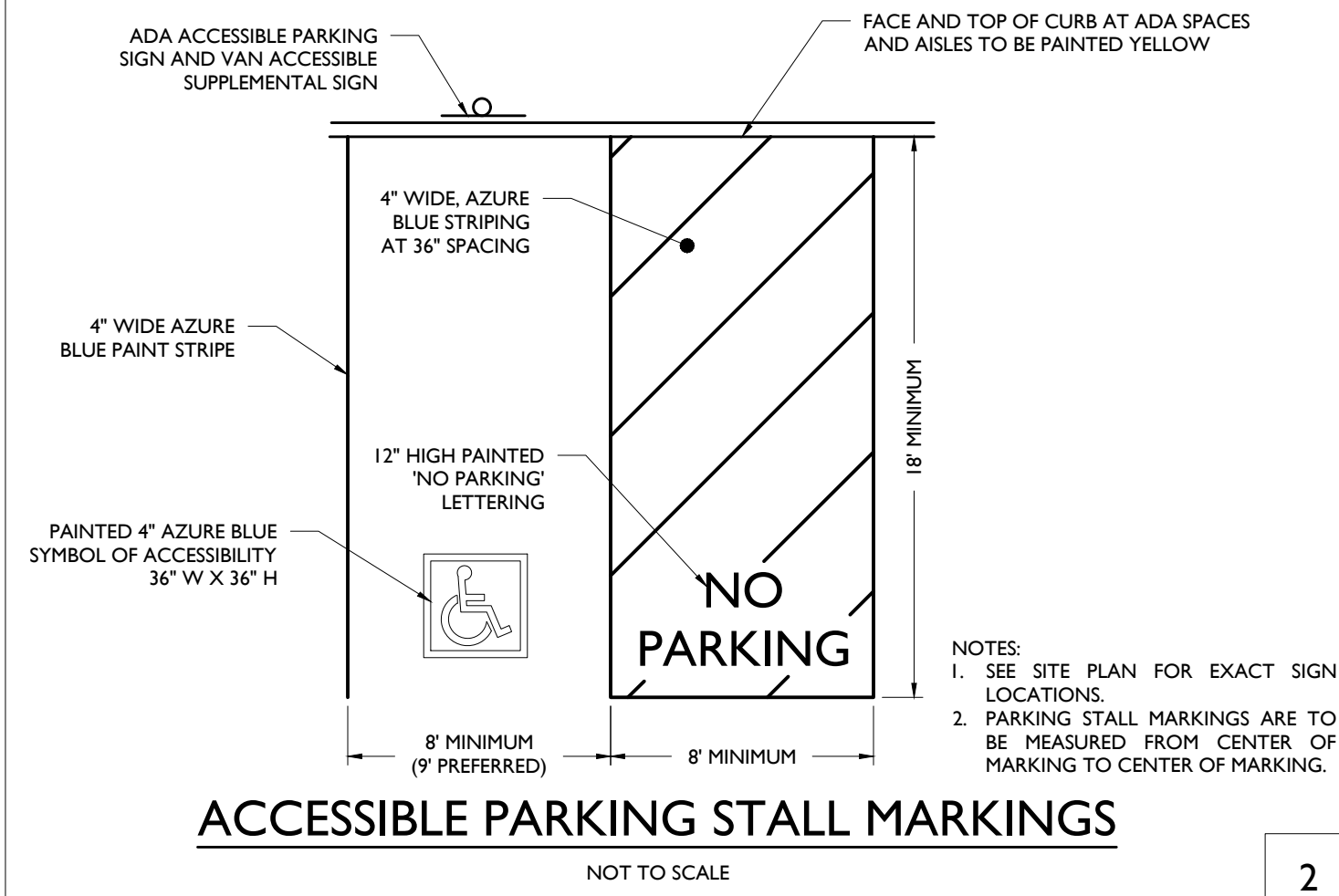
SCALE: 1" = 30' PROJECT ID: DET-230040

TITLE: **SOIL EROSION & SEDIMENT CONTROL PLAN**

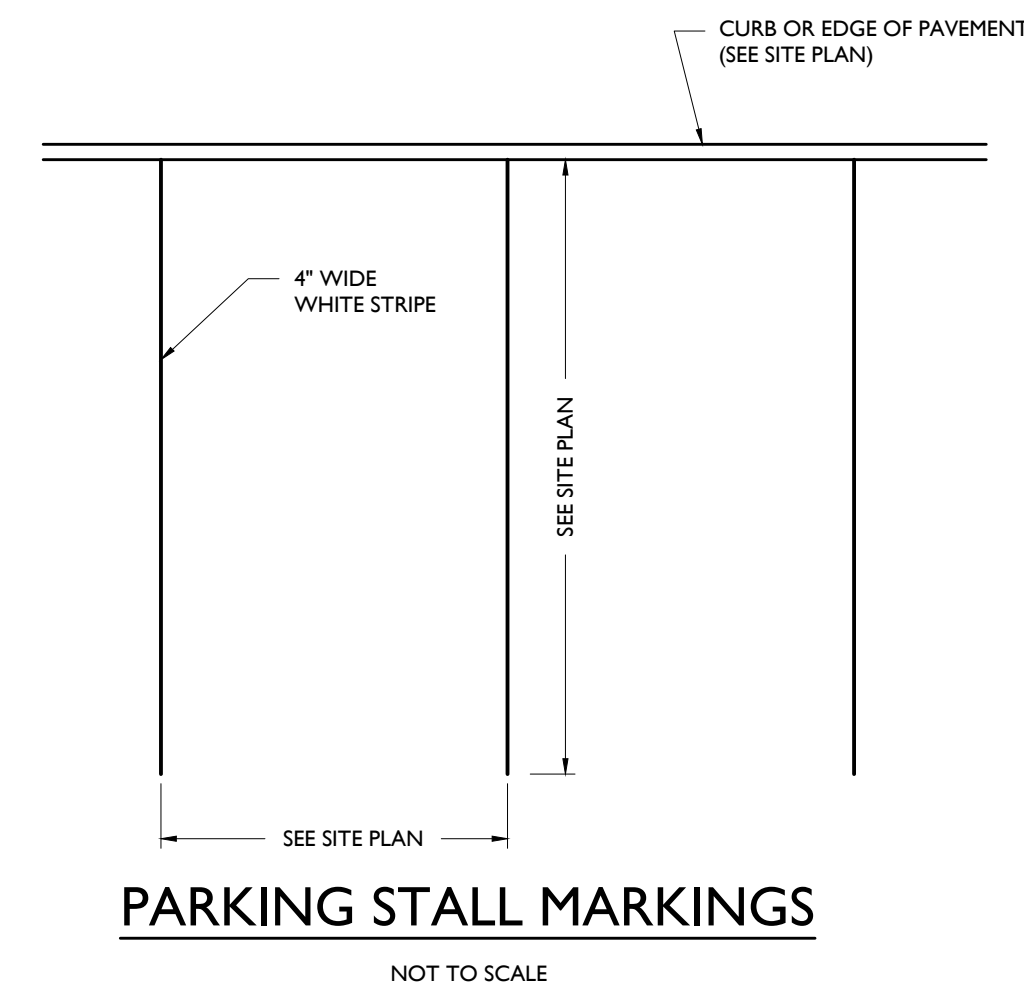
DRAWING: **C-11**



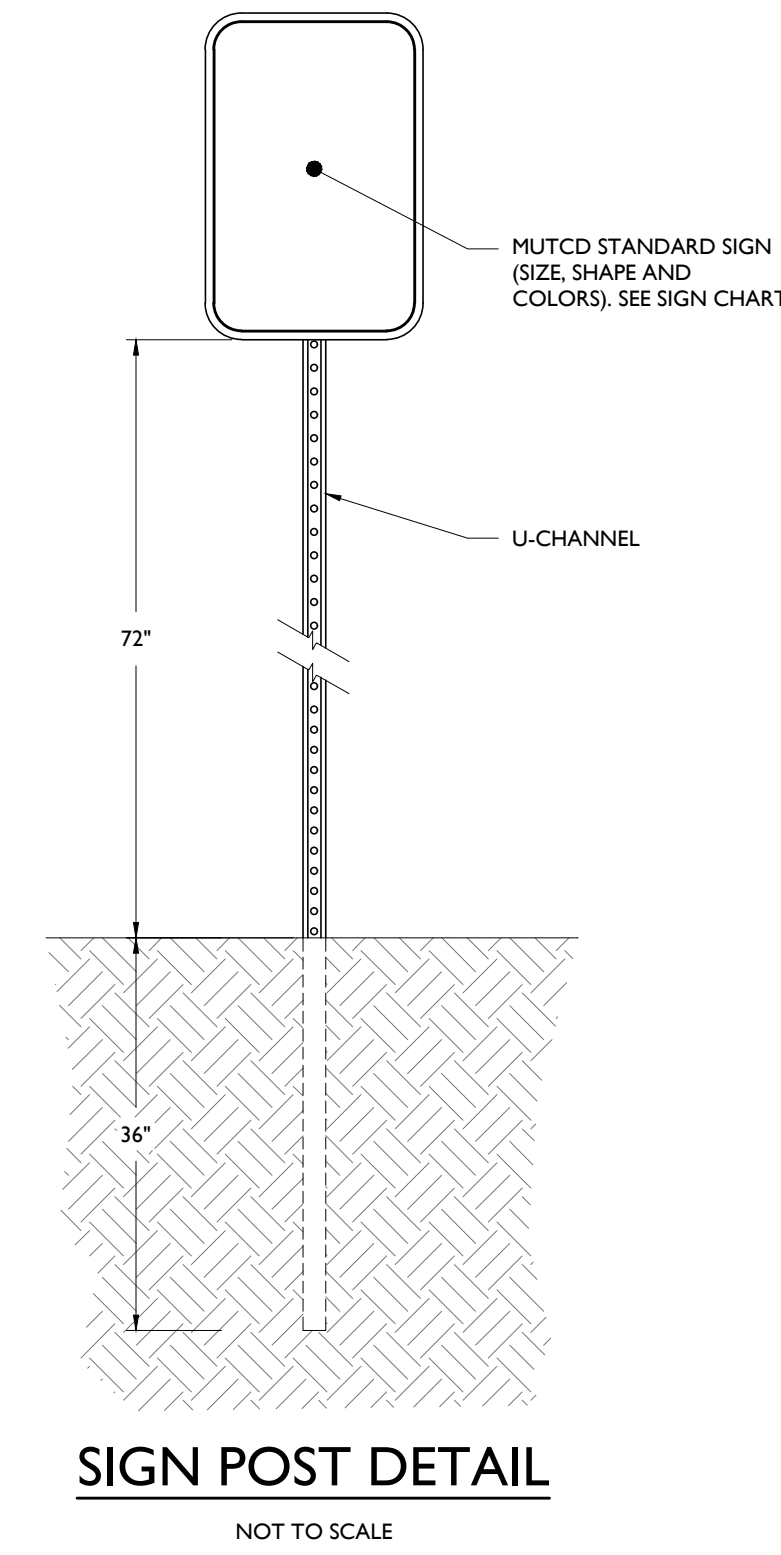
**ACCESSIBLE PARKING SIGN DETAIL**  
NOT TO SCALE



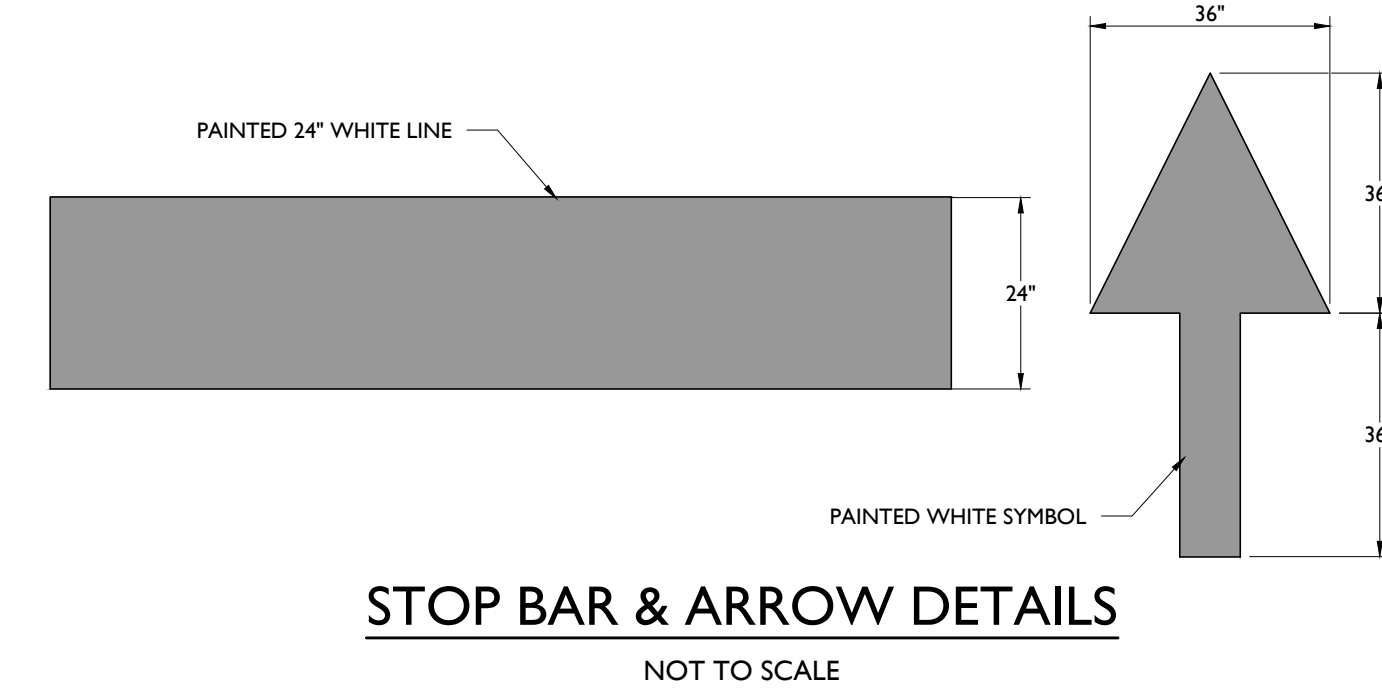
**ACCESSIBLE PARKING STALL MARKINGS**  
NOT TO SCALE



**PARKING STALL MARKINGS**  
NOT TO SCALE



**SIGN POST DETAIL**  
NOT TO SCALE

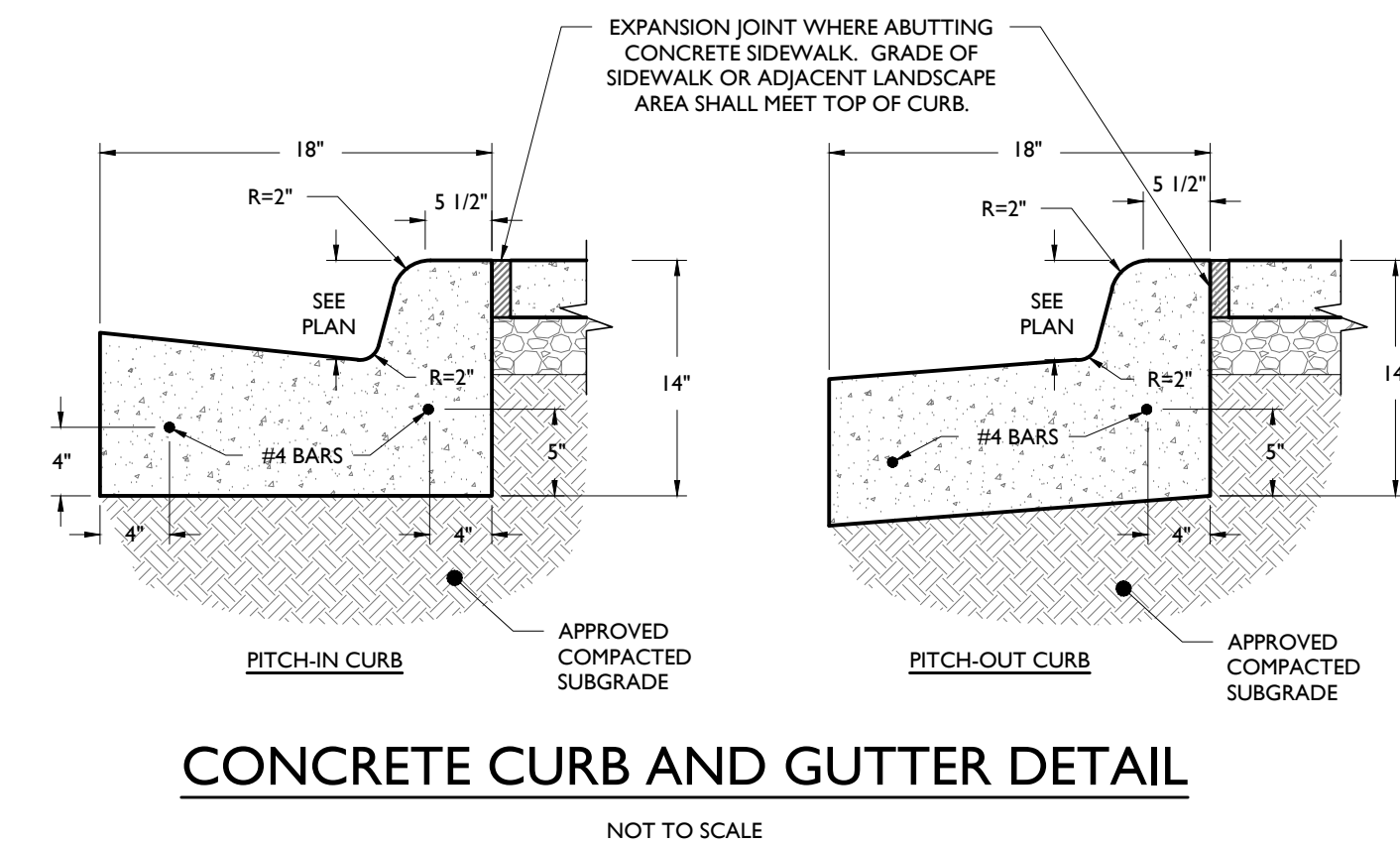


**STOP BAR & ARROW DETAILS**  
NOT TO SCALE

M.U.T.C.D. NUMBER	TEXT	COLOR		SIZE OF SIGN (WIDTH X HEIGHT)	TYPE OF MOUNT
		LEGEND	BACKGROUND		
STOP SIGN (R1-1)		WHITE	RED	36"x36"	GROUND

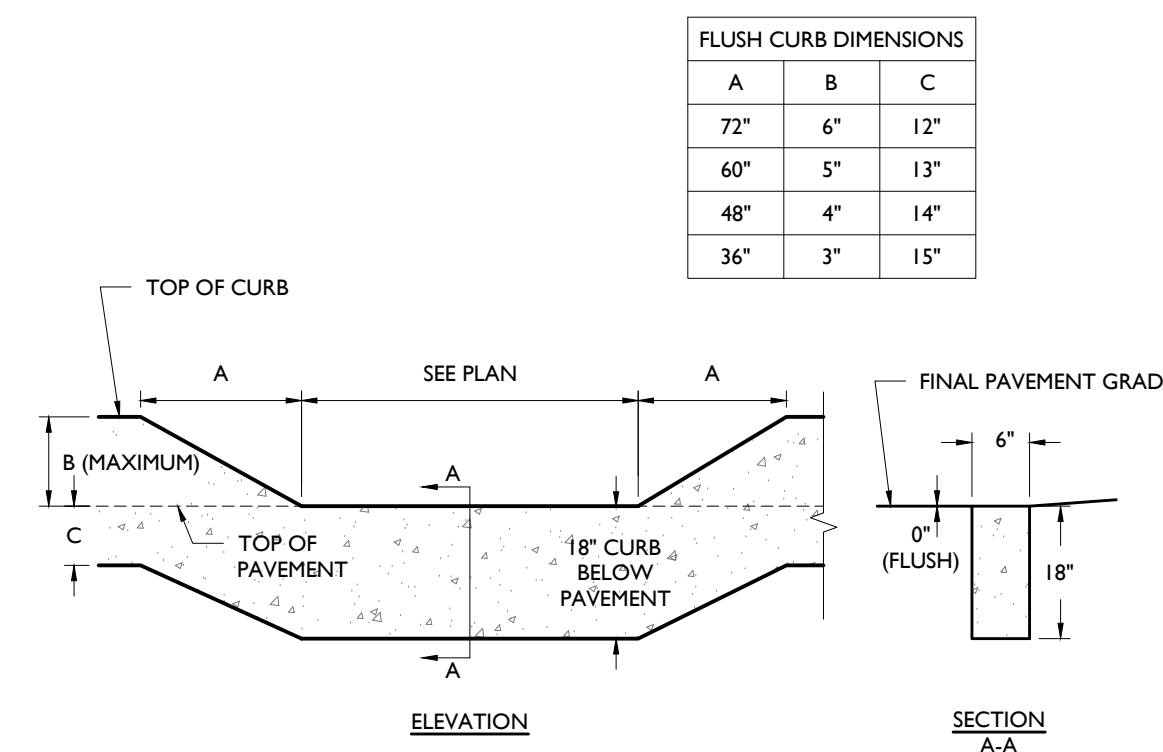
- NOTE:  
 1. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), EXCEPT AS NOTED.  
 2. ALL SIGNS SHALL BE MOUNTED AS TO NOT OBSTRUCT THE SHAPE OF "STOP" (R1-1) AND "YIELD" (R1-2) SIGNS.

**SIGN DATA TABLE**  
NOT TO SCALE

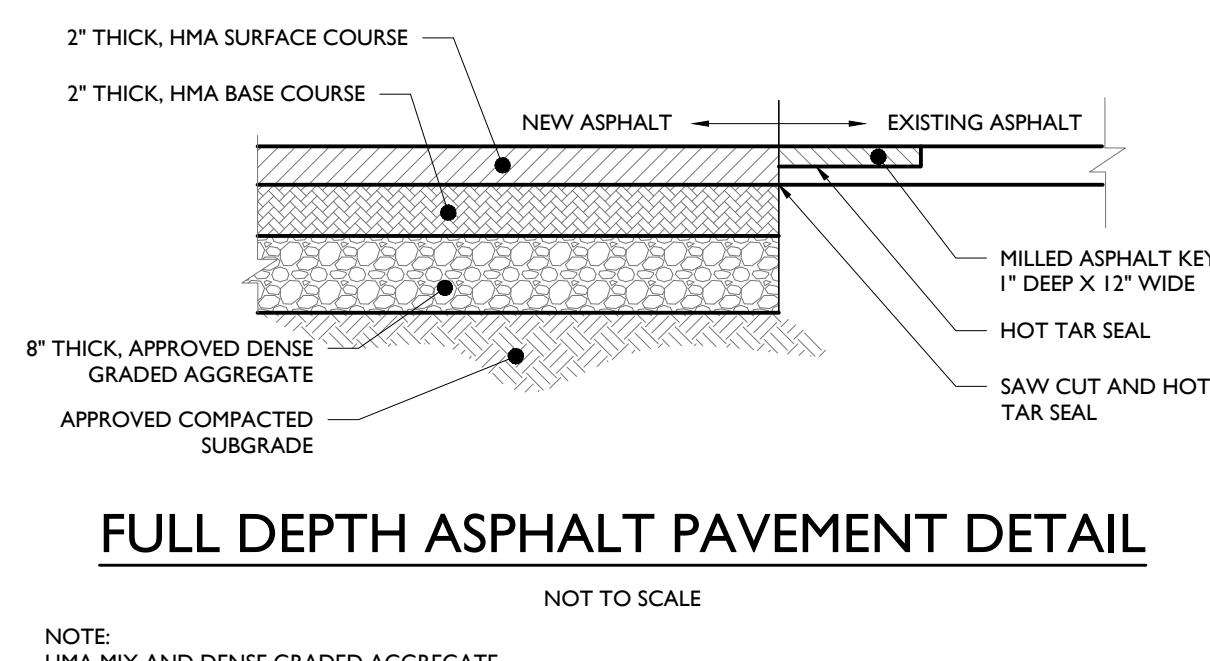


**CONCRETE CURB AND GUTTER DETAIL**  
NOT TO SCALE

- NOTES:  
 1. CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.  
 2. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-HOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM SURFACE.  
 3. HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.  
 4. 14" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.



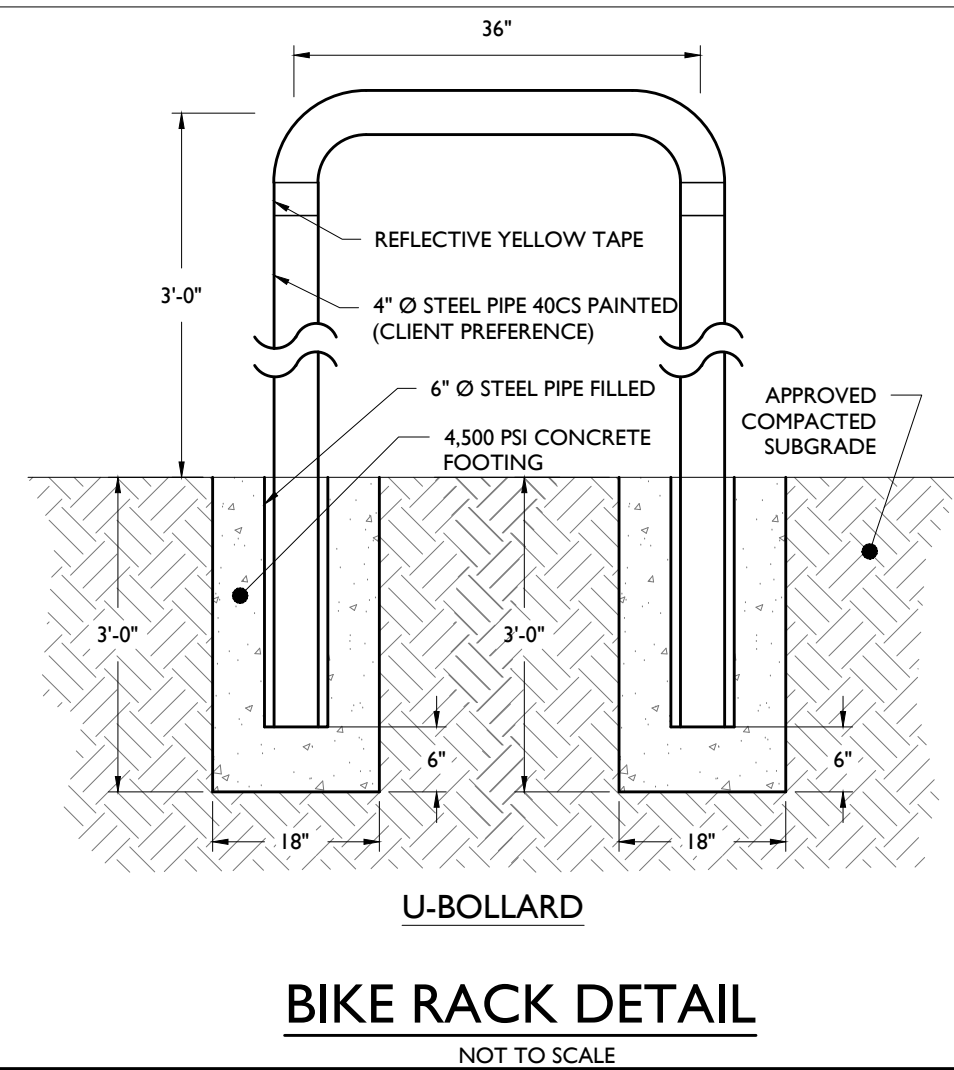
**FLUSH CURB DETAIL**  
NOT TO SCALE



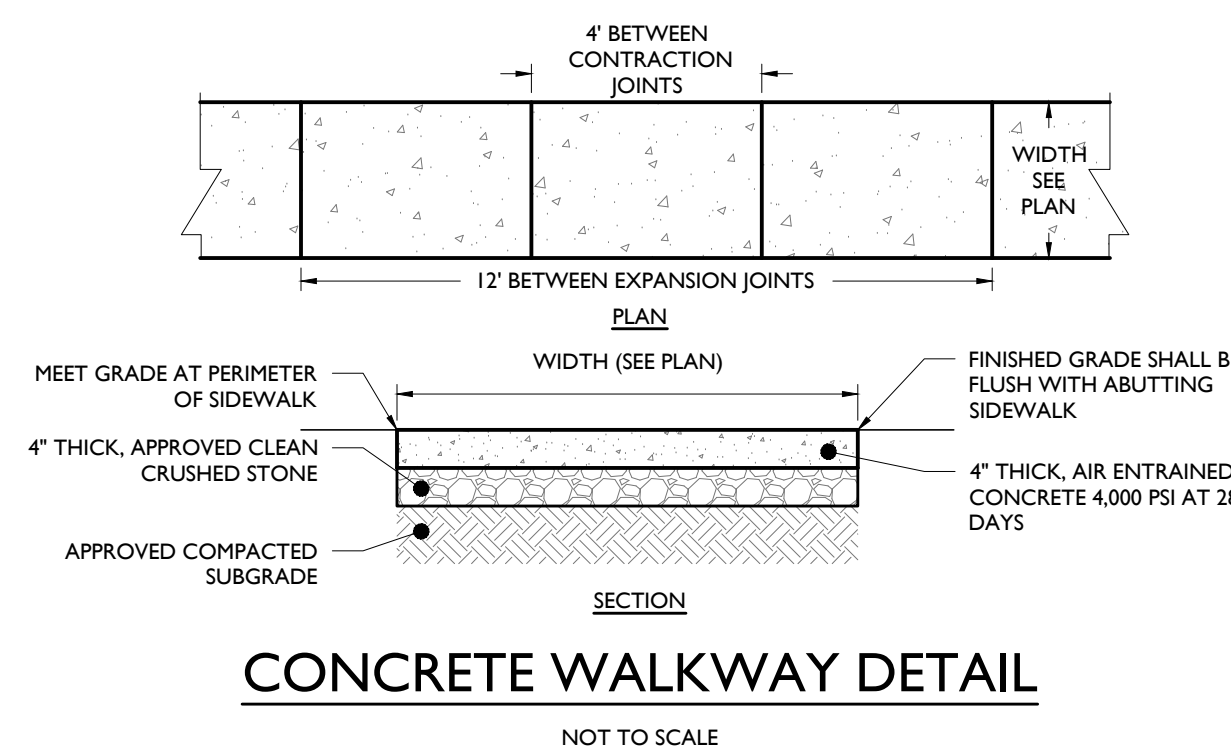
**FULL DEPTH ASPHALT PAVEMENT DETAIL**  
NOT TO SCALE

- NOTE:  
 HMA MIX AND DENSE GRADED AGGREGATE SHALL CONFORM TO STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

- PAVEMENT STRIPING & MARKINGS NOTES:  
 1. ALL SIGNING AND STRIPING IN EXISTING CONDITION IN CONFLICT WITH THE PROPOSED DESIGN PLAN SHALL BE REMOVED.  
 2. ALL PROPOSED SIGNING AND STRIPING SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.  
 3. PAVEMENT STRIPING AND MARKINGS SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE LOCAL, COUNTY AND STATE REQUIREMENTS.  
 4. UNLESS OTHERWISE SPECIFIED, ALL STRIPING AND MARKINGS IN THE PUBLIC RIGHT-OF-WAY SHALL BE OF THERMOPLASTIC PAINT OR PREFORMED THERMOPLASTIC MARKINGS.  
 5. UNLESS OTHERWISE SPECIFIED, ON SITE PARKING STALL STRIPING, FIRE LANE STRIPING AND DIRECTIONAL ARROWS SHALL BE EPOXY PAINT. ON SITE STOP BARS, "DO NOT ENTER" BARS, AND ASSOCIATED LETTERING SHALL BE THERMOPLASTIC PAINT OR PREFORMED THERMOPLASTIC MARKINGS.

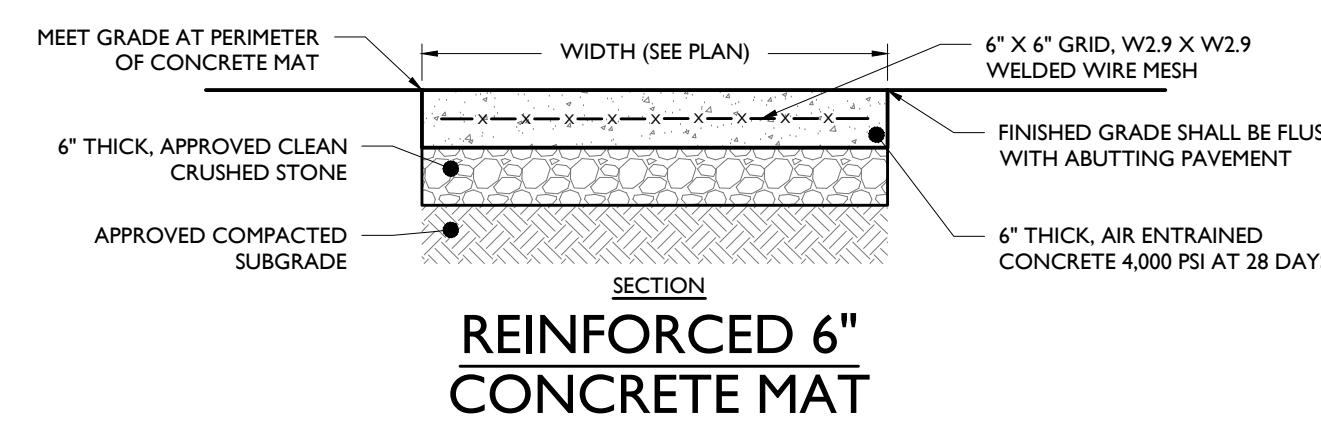


**BIKE RACK DETAIL**  
NOT TO SCALE



**CONCRETE WALKWAY DETAIL**  
NOT TO SCALE

- NOTES:  
 1. MAXIMUM CROSS SLOPE SHALL BE 1/4" PER FOOT.  
 2. 1/2" EXPANSION JOINTS SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-HOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM THE SURFACE.  
 3. 1" DEEP BY 1/2" WIDE TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT 4' INTERVALS.  
 4. EXPANSION JOINT SHALL BE PROVIDED WHERE ADJACENT TO A BUILDING.



**REINFORCED 6" CONCRETE MAT**  
NOT TO SCALE

- NOTES:  
 1. 1/2" EXPANSION JOINTS WITH WATER SEAL SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-HOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM THE SURFACE. LONGITUDINAL REBAR TO BE CUT AT EXPANSION JOINTS.  
 2. 1" DEEP BY 1/2" WIDE TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT MID-POINT BETWEEN EXPANSION JOINTS OR 6' INTERVALS MAX.  
 3. CONCRETE SHALL RECEIVE BROOM FINISH.  
 4. ALL EXPOSED CORNERS TO HAVE 12" CHAMFER.



**7 FT TREX COMPOSITE FENCE DETAIL**  
NOT TO SCALE

NO.	DATE	ISSUE	BY	DESCRIPTION
2	07/19/2023	NB		RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL
1	05/23/2023	NB		PRELIMINARY SITE PLAN APPROVAL

NOT APPROVED FOR CONSTRUCTION

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SITE DEVELOPMENT PLANS

**PET RESORT NOVI**  
PROPOSED PET BOARDING FACILITY

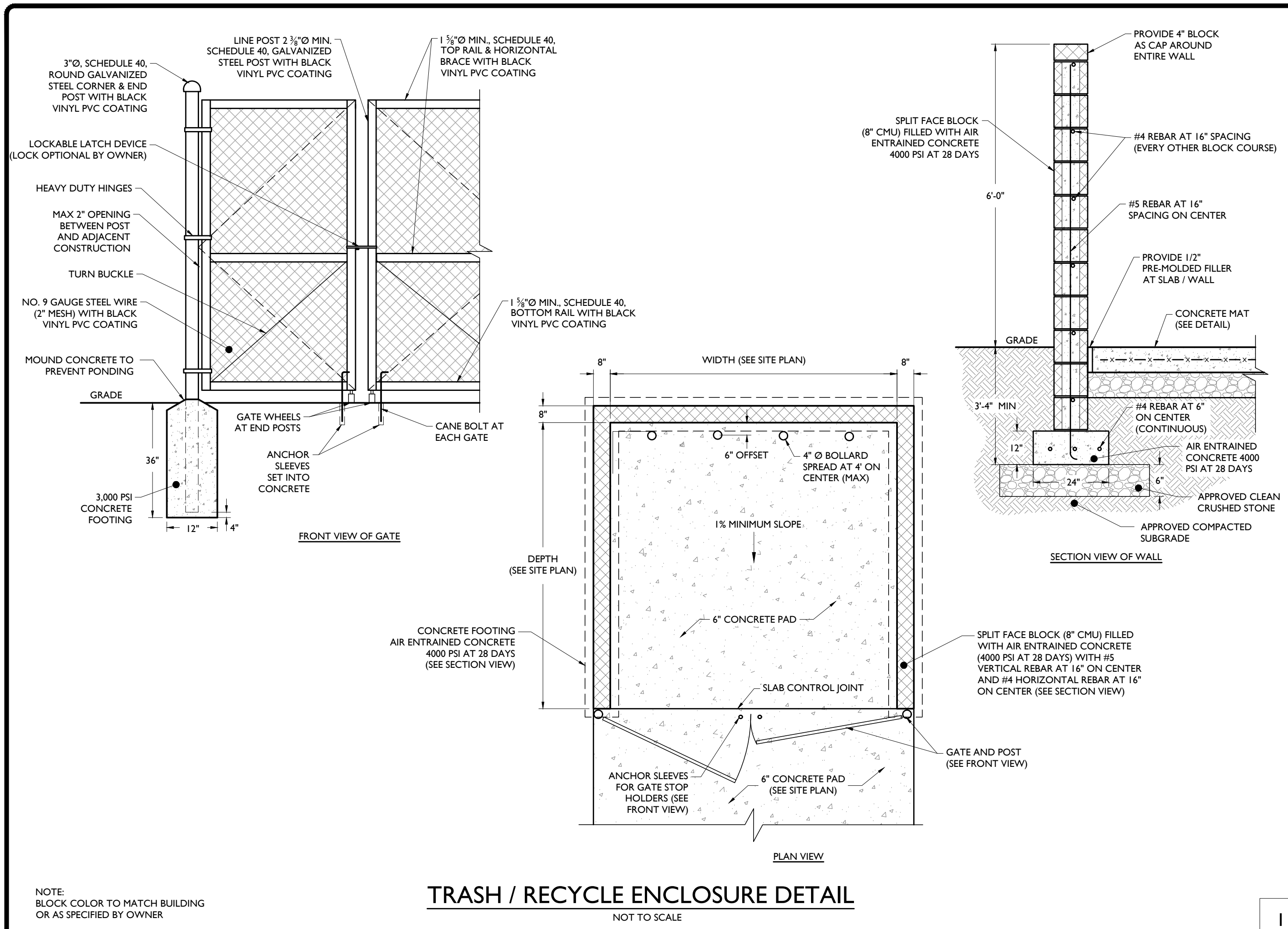
PID: 22-22-274-017  
 NOVI ROAD AND GEN MAR  
 CITY OF NOVI  
 OAKLAND COUNTY, MICHIGAN

STATE OF MICHIGAN  
 J. REID COOKSEY, P.E.  
 MICHIGAN LICENSE NO. 0201069428  
 LICENSED PROFESSIONAL ENGINEER

**STONEFIELD**  
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SCALE: AS SHOWN PROJECT ID: DET-230040  
 TITLE: CONSTRUCTION DETAILS  
 DRAWING: C-12

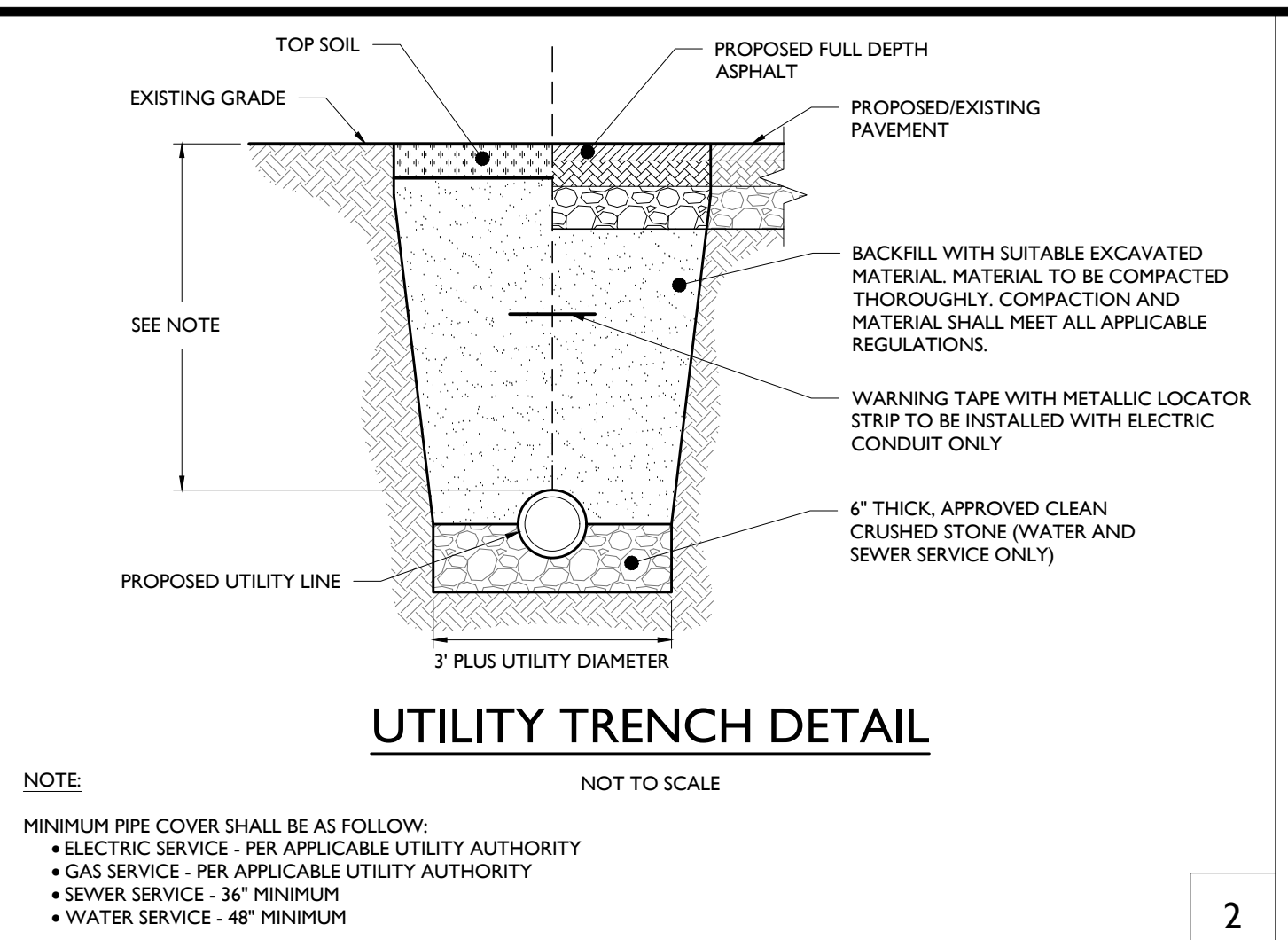
V:\072023\0723\0723-0001\PROJECTS\4877\NOV\_10\NOV\_10\10640\NOV10\10640.DWG



**TRASH / RECYCLE ENCLOSURE DETAIL**  
NOT TO SCALE

NOTE:  
BLOCK COLOR TO MATCH BUILDING OR AS SPECIFIED BY OWNER

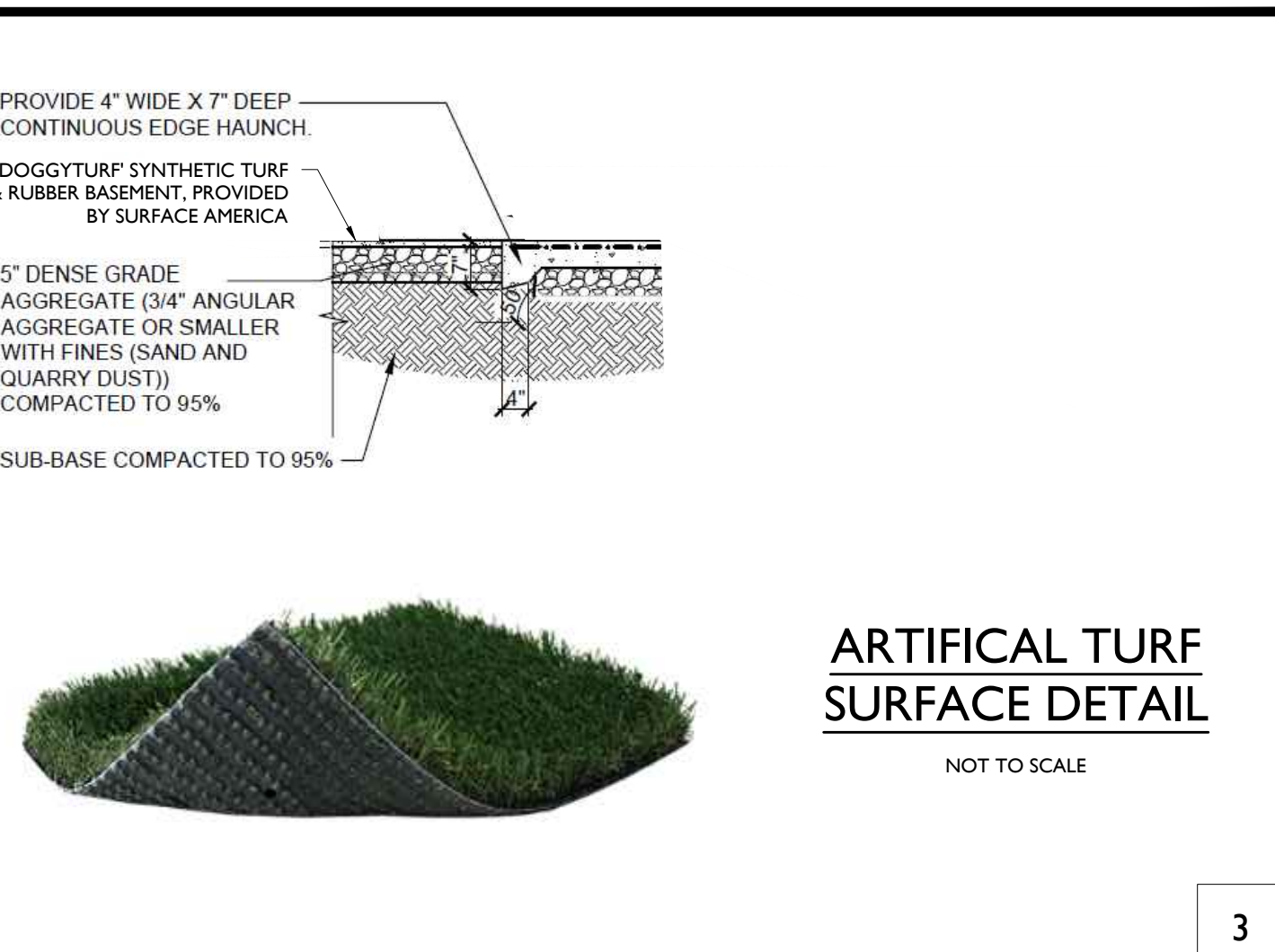
1



**UTILITY TRENCH DETAIL**  
NOT TO SCALE

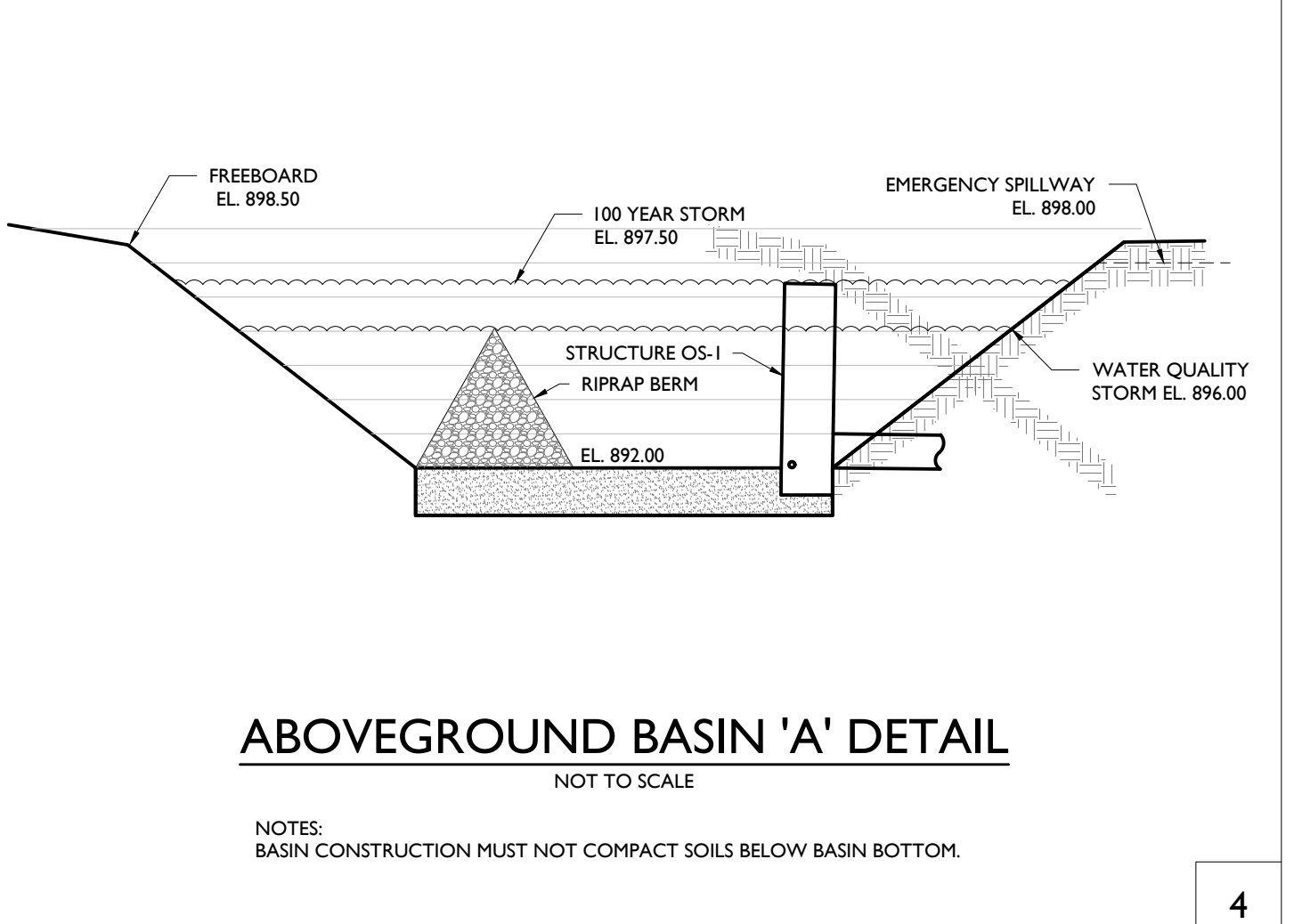
NOTE:  
MINIMUM PIPE COVER SHALL BE AS FOLLOWS:  
• ELECTRIC SERVICE - PER APPLICABLE UTILITY AUTHORITY  
• GAS SERVICE - PER APPLICABLE UTILITY AUTHORITY  
• SEWER SERVICE - 36" MINIMUM  
• WATER SERVICE - 48" MINIMUM

2



**ARTIFICIAL TURF SURFACE DETAIL**  
NOT TO SCALE

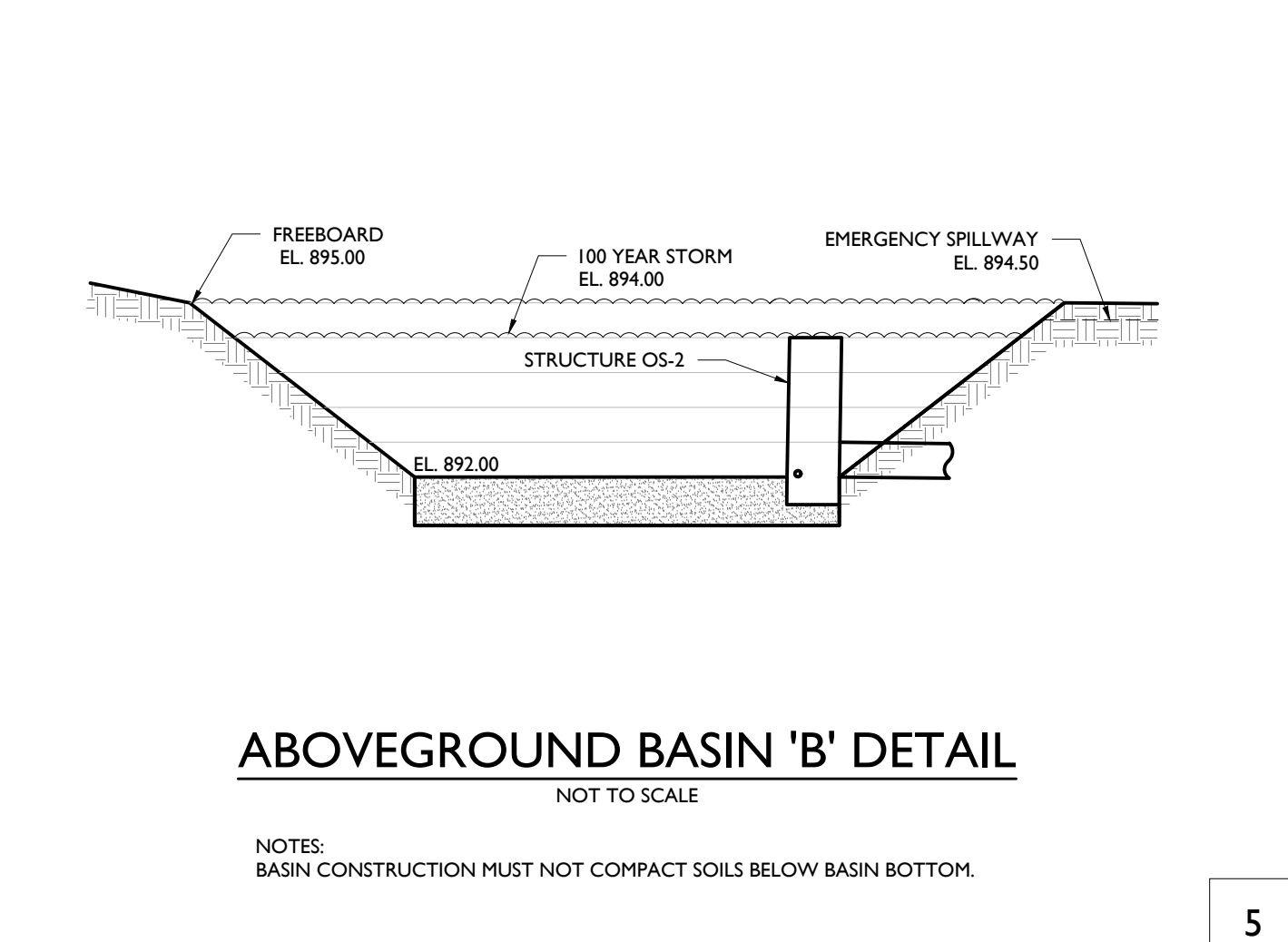
3



**ABOVEGROUND BASIN 'A' DETAIL**  
NOT TO SCALE

NOTES:  
BASIN CONSTRUCTION MUST NOT COMPACT SOILS BELOW BASIN BOTTOM.

4



**ABOVEGROUND BASIN 'B' DETAIL**  
NOT TO SCALE

NOTES:  
BASIN CONSTRUCTION MUST NOT COMPACT SOILS BELOW BASIN BOTTOM.

5

**TYPICAL ORDER EXAMPLE: MRM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Prefix	Light Source	Lumen Package	Lens	Distribution	Orientation <sup>2</sup>	Voltage	Driver
MRM - Mirada Medium Area Light	LED	9L - 9,000 lms 12L - 12,000 lms <b>18L - 18,000 lms</b> 24L - 24,000 lms 30L - 30,000 lms 36L - 36,000 lms 42L - 42,000 lms 48L - 48,000 lms 55L - 55,000 lms Custom Lumen Packages <sup>1</sup>	SIL - Silicone	2 - Type 2 <b>3 - Type 3</b> 5W - Type 5 Wide FT - Forward Throw FTA - Forward Throw Automotive AM - Automotive Merchandise	(blank) - standard L - Optics rotated left 90° R - Optics rotated right 90°	LUNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)	DIM - 0-10V Dimming (0-10%)

**FIXTURE 'A' CUT SHEET**

6

**TYPICAL ORDER EXAMPLE: SSW LED 3L FT UNV DIM 40 BRZ PC**

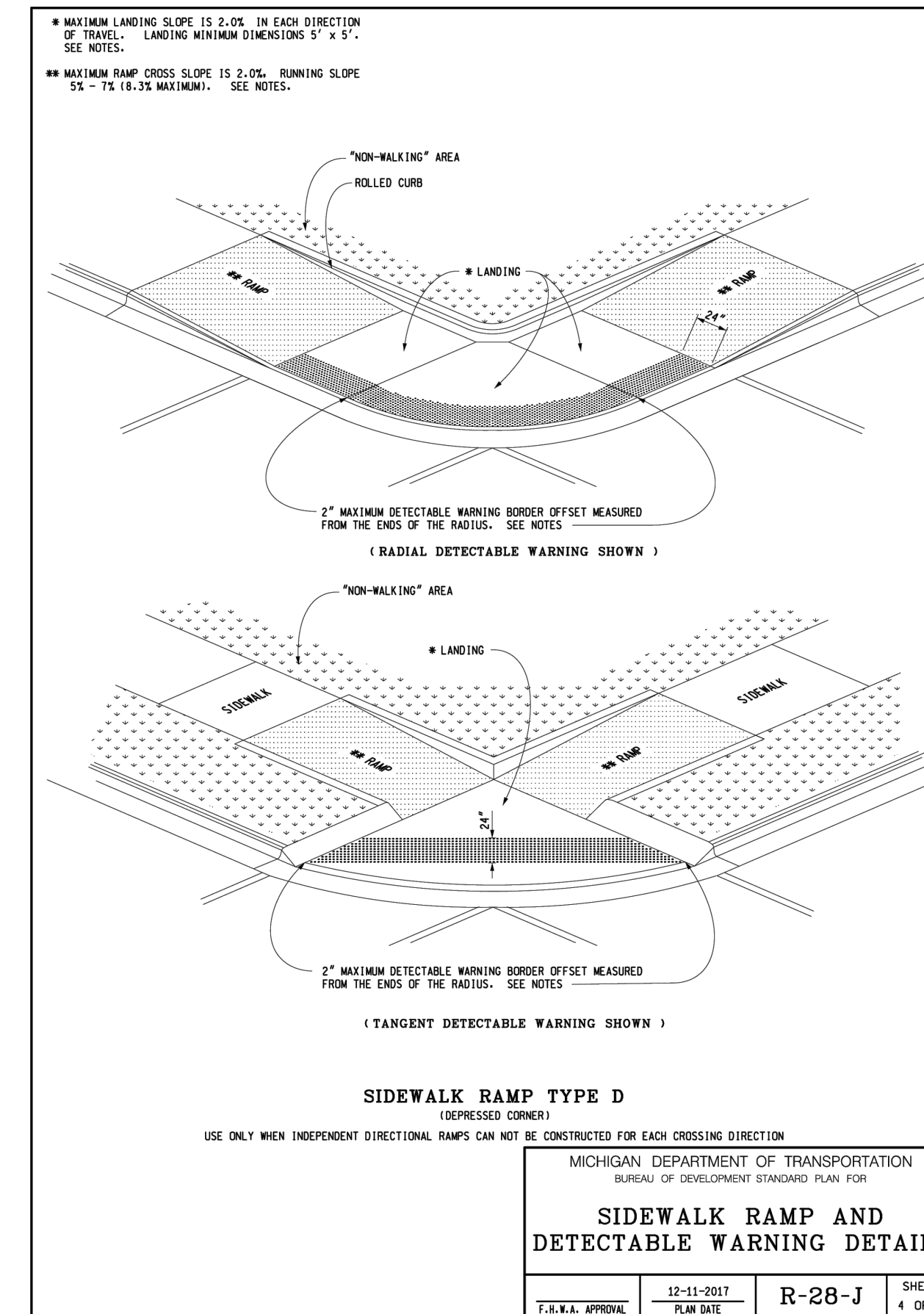
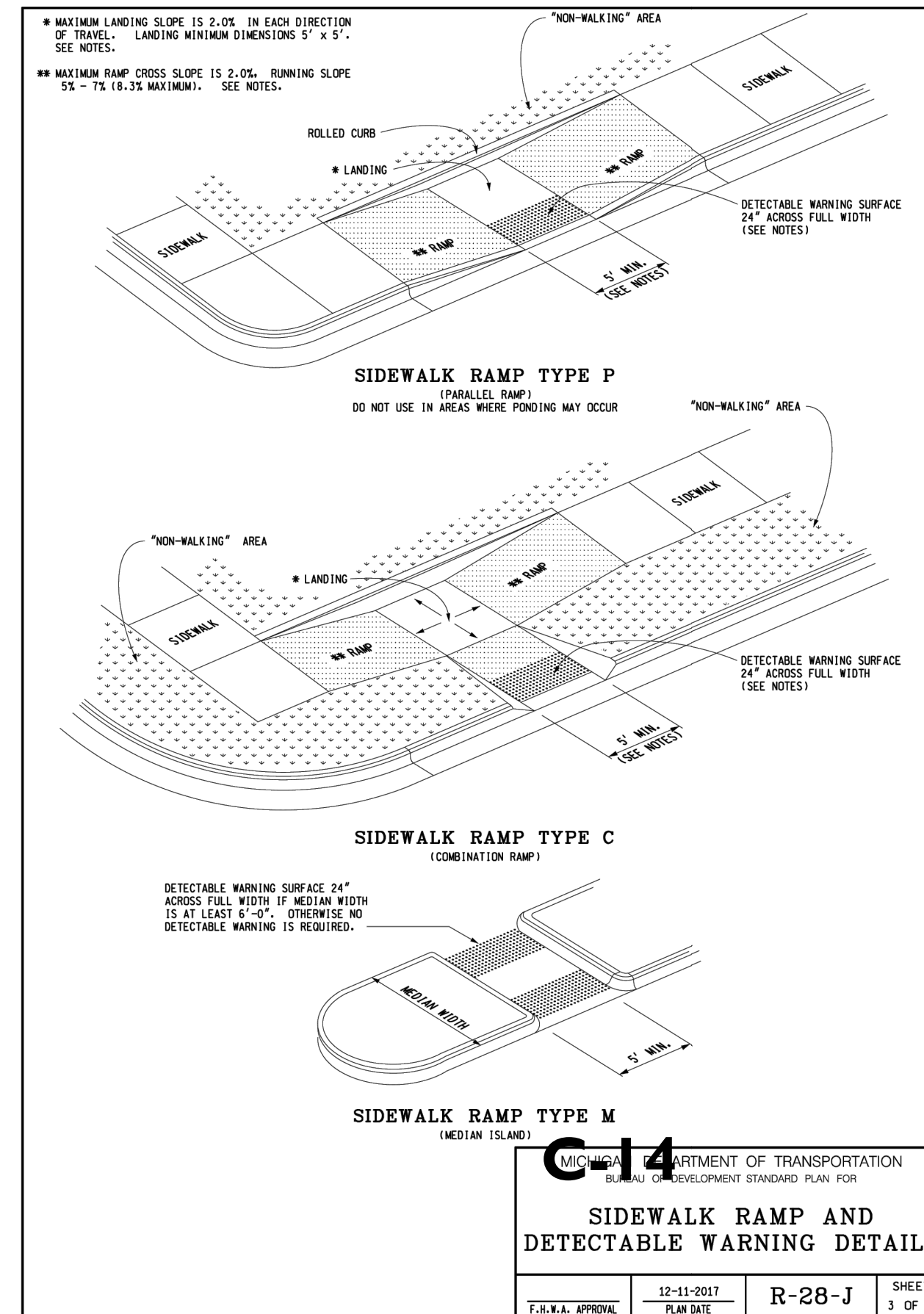
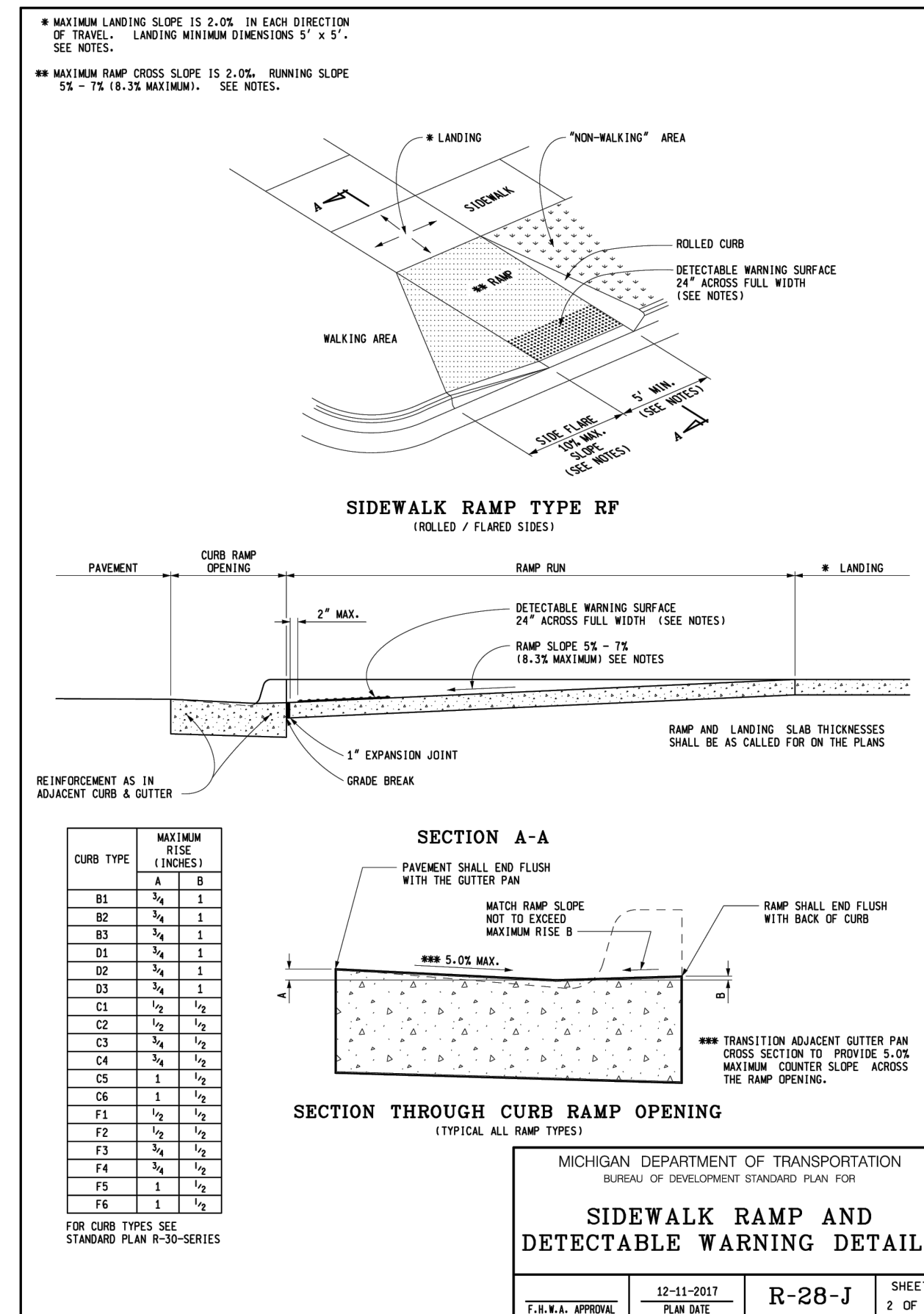
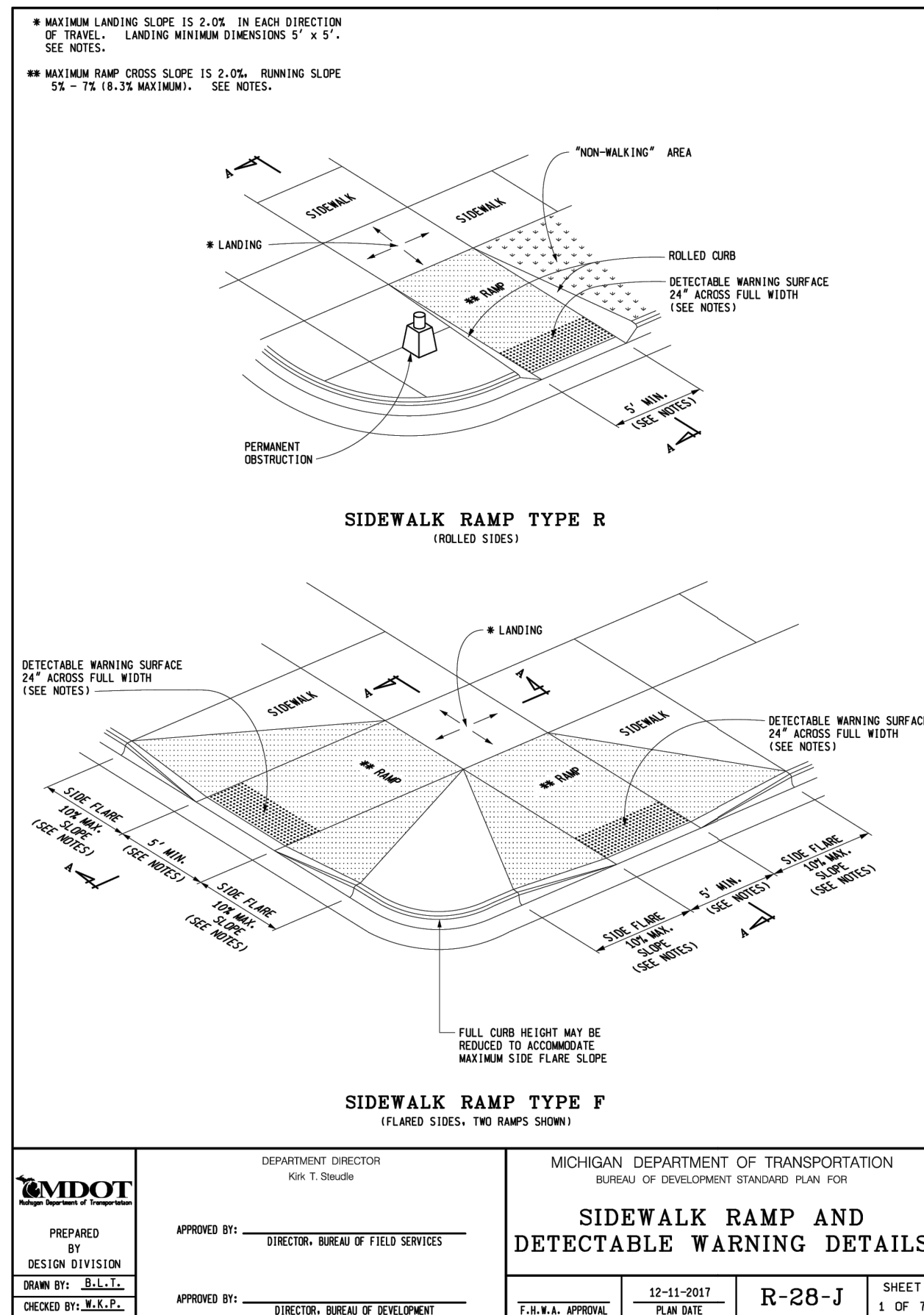
Prefix	Light Source	Lumen Package	Distribution	Voltage	Driver	Color Temperature / Rendering	Finish	Options
SSW - Small Commercial Wall	LED	3L - 3,000	<b>3 - Type 3</b> FT - Forward Throw Type 4	UNV - Universal Voltage (120-277V)	DIM - 0-10V Dimming <sup>2</sup>	<b>40 - 4000K / 70 CRI</b> 50 - 5000K / 70 CRI	BRZ - Bronze	<b>Blank - None</b> PCLUNV - Button Photocontrol (120-277V)

**FIXTURE 'B' CUT SHEET**

7

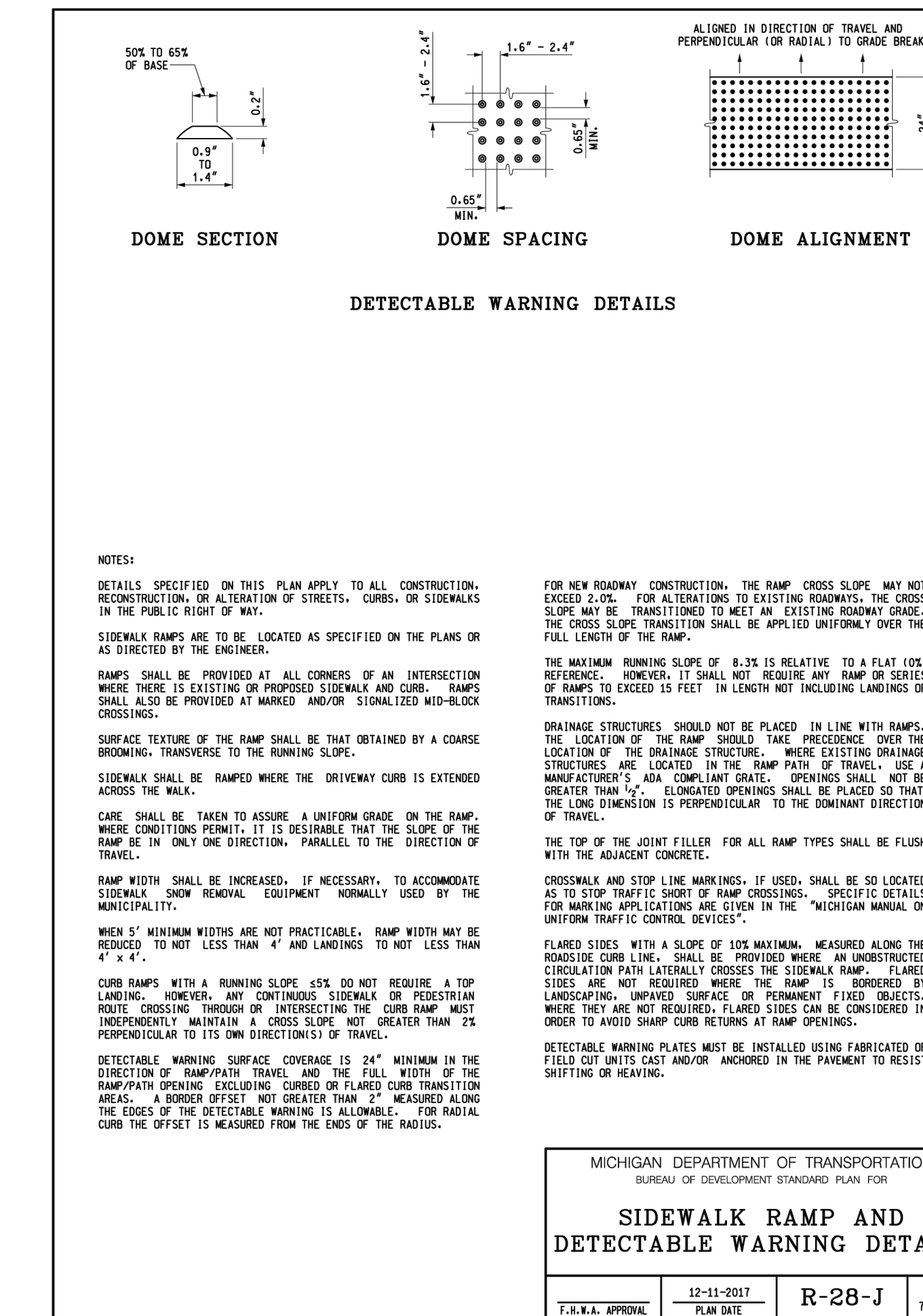
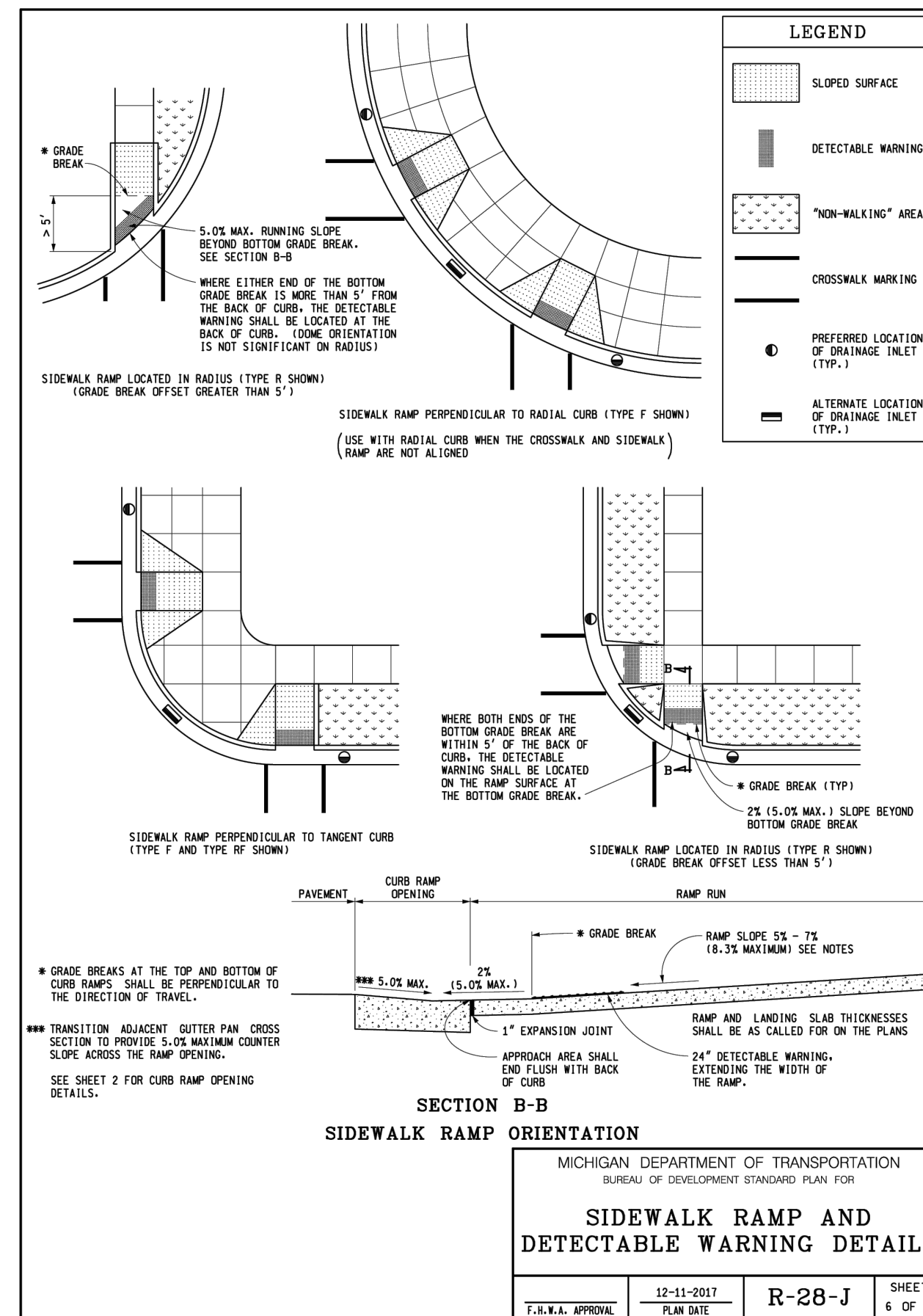
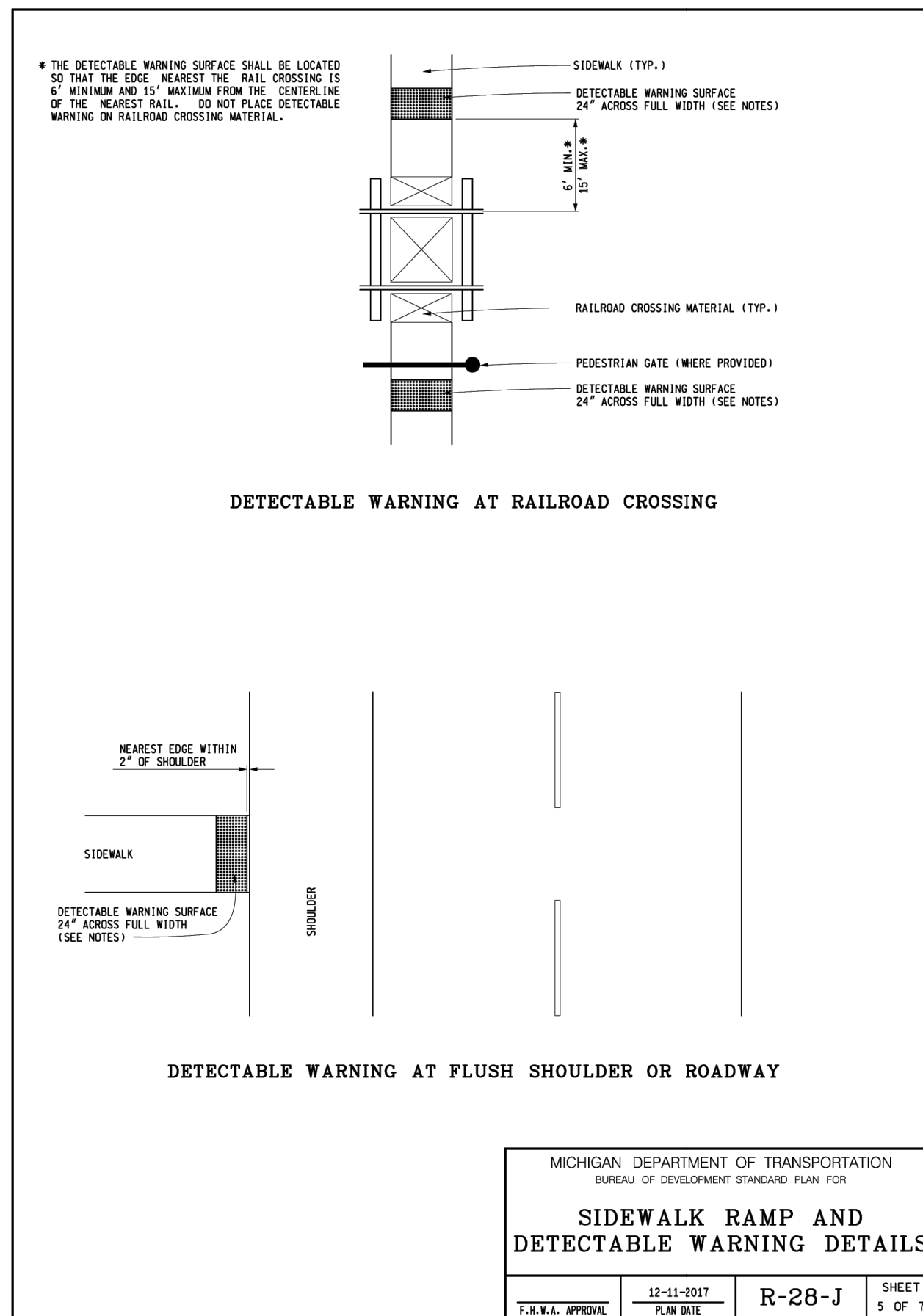
RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL PRELIMINARY SITE PLAN APPROVAL 07/19/2023 NB 05/23/2023 NB 2 1 1 ISSUE DATE BY	DESCRIPTION
<b>NOT APPROVED FOR CONSTRUCTION</b>	
Detroit, MI • New York, NY • Boston, MA Princeton, NJ • Tampa, FL • Rutherford, NJ <a href="http://www.stonefielddesign.com">www.stonefielddesign.com</a> 607 Shelby Suite 200, Detroit, MI 48226 Phone 248.247.1115	
<b>SITE DEVELOPMENT PLANS</b> <b>PET RESORT NOVI</b> <b>PROPOSED PET BOARDING FACILITY</b>	
SCALE: AS SHOWN PROJECT ID: DET-230040 TITLE: <b>CONSTRUCTION DETAILS</b> DRAWING: <b>C-13</b>	

V:\072323\DET230040\TITLE\ARCHITECT\5-14-23\NOV\_16-23\REVISIONS\DET-13.DWG



**MDOT SIDEWALK RAMP AND DETECTABLE WARNING STRIP DETAIL**

NOT TO SCALE



**MDOT SIDEWALK RAMP AND DETECTABLE WARNING STRIP DETAIL CONT.**

NOT TO SCALE

NO.	DATE	ISSUE	DESCRIPTION
1	05/23/2023	NB	PRELIMINARY SITE PLAN APPROVAL
2	07/19/2023	NB	RESUBMISSION FOR PRELIMINARY SITE PLAN APPROVAL

**NOT APPROVED FOR CONSTRUCTION**

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Phone 248.247.1115

**SITE DEVELOPMENT PLANS**

**PET RESORT NOVI**

**PROPOSED PET BOARDING FACILITY**

PID: 22-22-276-017  
 NOVI ROAD AND GEN MAR 2  
 CITY OF NOVI  
 OAKLAND COUNTY, MICHIGAN

STATE OF MICHIGAN  
 NORTHWEST COCKEY ENGINEER  
 KENNETH W. COCKEY, P.E.  
 MICHIGAN LICENSE NO. 201069428  
 LICENSED PROFESSIONAL ENGINEER

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SCALE: AS SHOWN PROJECT ID: DET-230040

TITLE:  
**CONSTRUCTION DETAILS**

DRAWING:  
**C-14**







# PET RESORT | NOVI

## NEW CONSTRUCTION NOVI ROAD & GEN MAR DRIVE NOVI, MI 48375

### ARCHITECT:

STUCKY VITALE ARCHITECTS  
27172 WOODWARD AVENUE  
ROYAL OAK, MICHIGAN 48067  
(248) 546-6700

### CIVIL:

STONEFIELD ENGINEERING  
607 SHELBY SUITE 200  
DETROIT, MI 48226  
(248) 247-1115

### PROJECT DATA:

BUILDING CODE AUTHORITY:  
CITY OF NOVI

OWNER:  
CHRISTOPHER AULEPP  
DC 121 INC.  
114 BEDDINGHAM CT.  
SALINE, MI 48176  
(248) 2893250

TYPE OF CONSTRUCTION: ---  
II-B

USE GROUP: ---  
B-BUSINESS

PROJECT AREA:  
TOTAL PROJECT AREA = 9,350 SF

OCCUPANT LOAD: ---  
9,350SF / 100 OCCUPANTS = 94 OCCUPANTS

EGRESS WIDTH:  
REQUIRED (2" PER OCCUPANT) = 94X.2 = 19"  
PROVIDED = 36" x 3 DOORS = 108"

PLUMBING FIXTURE COUNTS:  
WATER CLOSETS REQUIRED 1 PER 25 PEOPLE = 2  
WATER CLOSETS PROVIDED = 2

LAVATORIES REQUIRED 1 PER 40 PEOPLE = 2  
LAVATORIES PROVIDED = 2

DRINKING FOUNTAINS REQUIRED 1 PER 100 = 1  
DRINKING FOUNTAINS PROVIDED = 1

SERVICE SINK REQUIRED = 1  
SERVICE SINK PROVIDED = 1

### APPLICABLE CODES: (COMMERCIAL):

BUILDING CODE:  
2015 MICHIGAN BUILDING CODE (MBC) AS AMENDED

MECHANICAL CODE:  
2015 MICHIGAN MECHANICAL CODE AS AMENDED

PLUMBING CODE:  
2018 MICHIGAN PLUMBING CODE AS AMENDED

ELECTRICAL CODE:  
2017 NATIONAL ELECTRIC CODE (NEC) AS AMENDED & MICHIGAN AMENDMENTS PART 8.

ENERGY CODE:  
2015 MICHIGAN BUILDING CODE (CHAPTER 13)  
2015 MICHIGAN ENERGY CODE

ASHRAE 90.1-2013 ENERGY STANDARDS FOR BUILDINGS

FIRE CODE:  
2015 INTERNATIONAL FIRE CODE REFERENCED IN 2015 MICHIGAN BUILDING CODE

BARRIER FREE REQUIREMENTS:  
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (DOJ)  
MBC-2012 (CHAPTER 11)  
ICC / ANSI 117.1 - 2009, EXCEPT SECTION 611 & 707

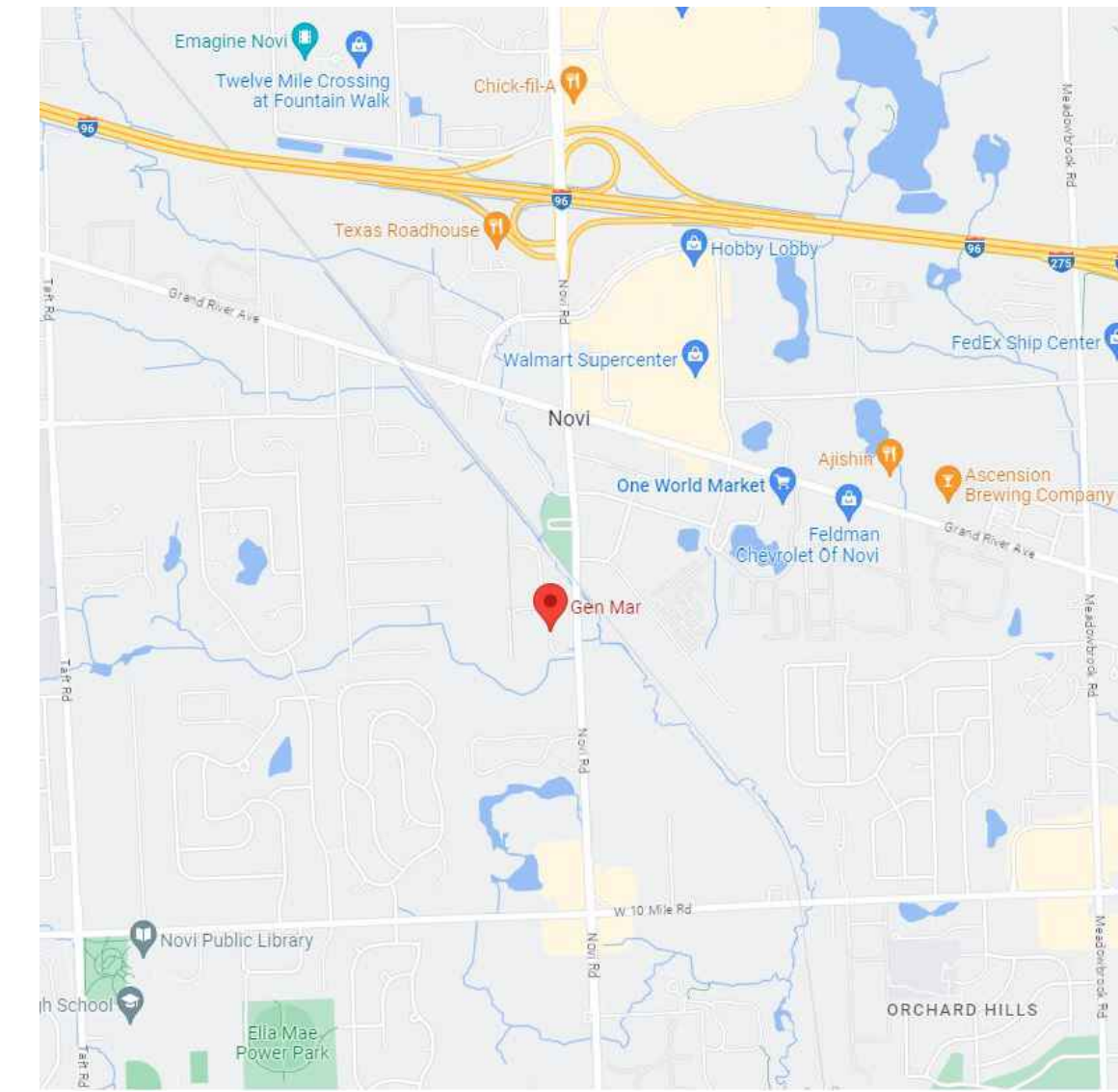
LIFE SAFETY CODES:  
2015 NFPA 101 LIFE SAFETY CODE  
2013 NFPA 72 NATIONAL FIRE ALARM CODE

SHEET INDEX		ISSUED FOR	
DRAWING INDEX KEY:		07.21.23 SITE PLAN APPROVAL	
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<input checked="" type="checkbox"/>	ISSUED		
<input checked="" type="checkbox"/>	REFERENCE		
GENERAL			
TS1.1	TITLE SHEET AND SHEET INDEX AND LOCATOR PLAN	<input checked="" type="checkbox"/>	
CIVIL			
C-1	COVER SHEET	<input checked="" type="checkbox"/>	
C-2	SITE PLAN	<input checked="" type="checkbox"/>	
C-3	GRADING PLAN	<input checked="" type="checkbox"/>	
C-4	STORM WATER MANAGEMENT PLAN	<input checked="" type="checkbox"/>	
C-5	UTILITY PLAN	<input checked="" type="checkbox"/>	
C-6	LANDSCAPING PLAN	<input checked="" type="checkbox"/>	
C-7	LANDSCAPING AREA & TREE LAYOUT PLAN	<input checked="" type="checkbox"/>	
C-8	LANDSCAPING DETAILS	<input checked="" type="checkbox"/>	
C-9	SOIL EROSION & SEDIMENT CONTROL PLAN	<input checked="" type="checkbox"/>	
C-10	CONSTRUCTION DETAILS	<input checked="" type="checkbox"/>	
C-11	CONSTRUCTION DETAILS	<input checked="" type="checkbox"/>	
T of 1	BOUNDARY & TOPOGRAPHIC SURVEY	<input checked="" type="checkbox"/>	
ARCHITECTURAL			
A1.1	ARCHITECTURAL FLOOR PLAN	<input checked="" type="checkbox"/>	
A3.1	EXTERIOR ELEVATIONS	<input checked="" type="checkbox"/>	

NOTE:  
THESE CONSTRUCTION DRAWINGS WERE PREPARED FOR COMPLIANCE WITH THE MICHIGAN CONSTRUCTION CODES IN EFFECT AT THE TIME OF PERMIT SUBMITTAL. ALL ENGINEERS, CONTRACTORS AND SUPPLIERS INVOLVED WITH THIS PROJECT SHALL COMPLY WITH THE SAME CODES. ISSUED AND APPROVED CODE MODIFICATIONS AND/OR CITY CODE AUTHORITY CONSTRUCTION BOARDS OF APPEALS RULINGS AND WHENEVER REQUIRED SHALL PROVIDE SHOP DRAWINGS AND SUBMITTALS CLEARLY DESCRIBING COMPLIANCE TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW AND APPROVAL.

SYMBOL LEGEND		ABBREVIATION	
	DARKENED ARROW INDICATES ELEVATED SECTION	@	ACOUST.
	ELEVATION NUMBER	A.C.T.	ACOUSTIC CEILING TILE
	SHEET NUMBER WHERE ELEVATION IS LOCATED	ADJ.	ADJACENT
	ELEVATION NUMBER	A.F.F.	ABOVE FINISH FLOOR
	SHEET NUMBER WHERE ELEVATION IS LOCATED	ALUM.	ALUMINUM
	DETAIL REFERENCE NUMBER	ANOD.	ANODIZED
	SHEET NUMBER WHERE DETAIL IS LOCATED	BD.	BOARD
	DETAIL NUMBER	BLDG.	BUILDING
	DETAIL NAME	BLK.	BLOCK
	DRAWING SCALE	BLKG.	BLOCKING
	SHEET NUMBER WHERE DETAIL IS REFERENCED	CEM.	CEMENT
	REFERENCE POINT OF ELEVATION	C.J.	CONTROL JOINT
	HEIGHT ABOVE FINISHED FLOOR	CLG.	CEILING
	HEIGHT ABOVE FINISHED FLOOR	CL.	CENTER LINE
	DATUM SYMBOL INDICATES A SPECIFIC REFERENCE HEIGHT OF MATERIAL INDICATED	C.O.	CLEAN OUT
	ROOM NAME	COL.	COLUMN
	ROOM NUMBER	CONC.	CONCRETE
	FINISH TAG	C.G.	CORNER GUARD
	NUMBERS DESIGNATE VERTICAL COLUMN LINES	CONST.	CONSTRUCTION
	LETTERS DESIGNATE HORIZONTAL COLUMN LINES	CONT.	CONTINUOUS
	CIRCLES REPRESENT NEW COLUMN LINES	CORR.	CORROGATED
	DIAMOND REPRESENT EXISTING COLUMNS	CPY.	CARPET
	EXISTING DOOR SYMBOL	C.T.	CERAMIC TILE
	NEW DOOR SYMBOL	DET.	DETAIL
	DOOR DESIGNATION	DIA.	DIAMETER
	WALL TYPE DESIGNATION NUMBER - COORDINATE WITH SCHEDULE	DM.	DIMENSION
	EQUIPMENT DESIGNATION NUMBER - COORDINATE WITH PLAN NOTES	DN.	DOWN
	KEY NOTE DESIGNATION NUMBER - COORDINATE WITH PLAN NOTES	D.O.	DOOR OPENING
	WINDOW DESIGNATION LETTER - COORDINATE WITH PLAN NOTES	DR.	DOOR
	ADDENDUM DESIGNATION NUMBER	DWG.	DRAWING
	BULLETIN DESIGNATION NUMBER	EA.	EACH
	MATCH LINE	ELEV.	ELEVATION
	SHEET REFERENCE FOR DRAWING CONTINUATION	E.W.	EACH WAY
		EXG.	EXISTING
		EXIST.	EXISTING
		EXP.	EXPANSION, EXPOSED
		EXT.	EXTERIOR
		F.D.	FLOOR DRAIN
		FDN.	FOUNDATION
		F.R.P.	FIBER REINFORCED PANELS
		FIN.	FINISH
		FLR.	FLOOR
		F.O.	FACE OF
		F.O.S.	FACE OF STUD
		FR.	FRAME
		FTG.	FOOTING
		FV.	FIELD VERIFY
		GA.	GAUGE
		GALV.	GALVANIZED
		GYP.	GYPSUM
		HDW.	HARDWARE
		H.M.	HOLLOW METAL
		HORIZ.	HORIZONTAL
		HT.	HEIGHT
		I.D.	INSIDE DIAMETER
		INSUL.	INSULATION
		INT.	INTERIOR
		JT.	JOINT
		LAV.	LAVATORY
		LG.	LONG
		L.L.O.	LONG LEG OUTSTANDING
		L.L.V.	LONG LEG VERTICAL
		MAX.	MAXIMUM
		MECH.	MECHANICAL
		MET.	METAL
		MEZZ.	MEZZANINE
		M.I.	MISCELLANEOUS IRON
		MIN.	MINIMUM
		MISC.	MISCELLANEOUS
		M.O.	MASONRY OPENING
		N.I.C.	NOT IN CONTRACT
		N.T.S.	NOT TO SCALE
		O.C.	ON CENTER
		O.D.	OUTSIDE DIAMETER
		OPNG.	OPENING
		OPP.	OPPOSITE
		PL.G.	PLATE GLASS
		PL.S.	PLATE STEEL
		P.LAM.	PLASTIC LAMINATE
		PLAS.	PLASTER
		PREFAB.	PREFABRICATED
		PROJ.	PROJECT, PROJECTION
		P.S.F.	POUNDS PER SQUARE FOOT
		PT.	PAINT, POINT
		R.	RISER
		R.A.	RETURN AIR
		R.B.	RUBBER BASE
		R.C.	ROOF CONDUCTOR
		R.C.P.	REFLECTED CEILING PLAN
		R.D.	ROOF DRAIN
		R.F.	RUBBER FLOORING
		REINF.	REINFORCED, REINFORCING
		REQD.	REQUIRED
		RFG.	ROOFING
		RM.	ROOM
		R.S.	ROOF SUMP
		R.T.	RUBBER TILE
		SAN.	SANITARY
		SCHED.	SCHEDULE
		SHT.	SHEET
		SIM.	SIMILAR
		SPEC.	SPECIFICATION
		S.S.	SERVICE SINK
		STL.	STEEL
		STD.	STANDARD
		STOR.	STORAGE
		STRUCT.	STRUCTURAL
		SUSP.	SUSPENDED
		SW.	SWITCH
		SYM.	SYMMETRICAL
		T.	TREAD
		TAB.	TOP AND BOTTOM
		TEL.	TELEPHONE
		TERR.	TERRAZZO
		T&G.	TONGUE AND GROOVE
		THK.	THICK, THICKNESS
		THRES.	THRESHOLD
		T.O.S.	TOP OF STEEL
		TYP.	TYPICAL
		UNDERCUT	UNDERCUT
		UNLESS NOTED OTHERWISE	UNLESS NOTED OTHERWISE
		V.B.	VINYL BASE
		V.C.T.	VINYL COMPOSITION TILE
		V.I.F.	VERIFY IN FIELD
		W.	WIDE
		VERT.	VERTICAL
		WAINSCOT	WAINSCOT
		W.C.	WATER CLOSET
		WD WIN.	WOOD WINDOW
		WT.	WEIGHT
		W.W.F.	WELDED WIRE FABRIC

MATERIAL LEGEND	
	ACOUSTICAL CEILING
	BATT/LOOSE INSULATION
	BLOCKING/ROUGH LUMBER - CONTINUOUS
	BLOCKING/ROUGH LUMBER
	CONCRETE
	FINISHED WOOD
	GLASS
	GYPSON WALLBOARD
	MASONRY
	PARTICLE BOARD
	PLYWOOD



VICINITY MAP  
SCALE: N.T.S.



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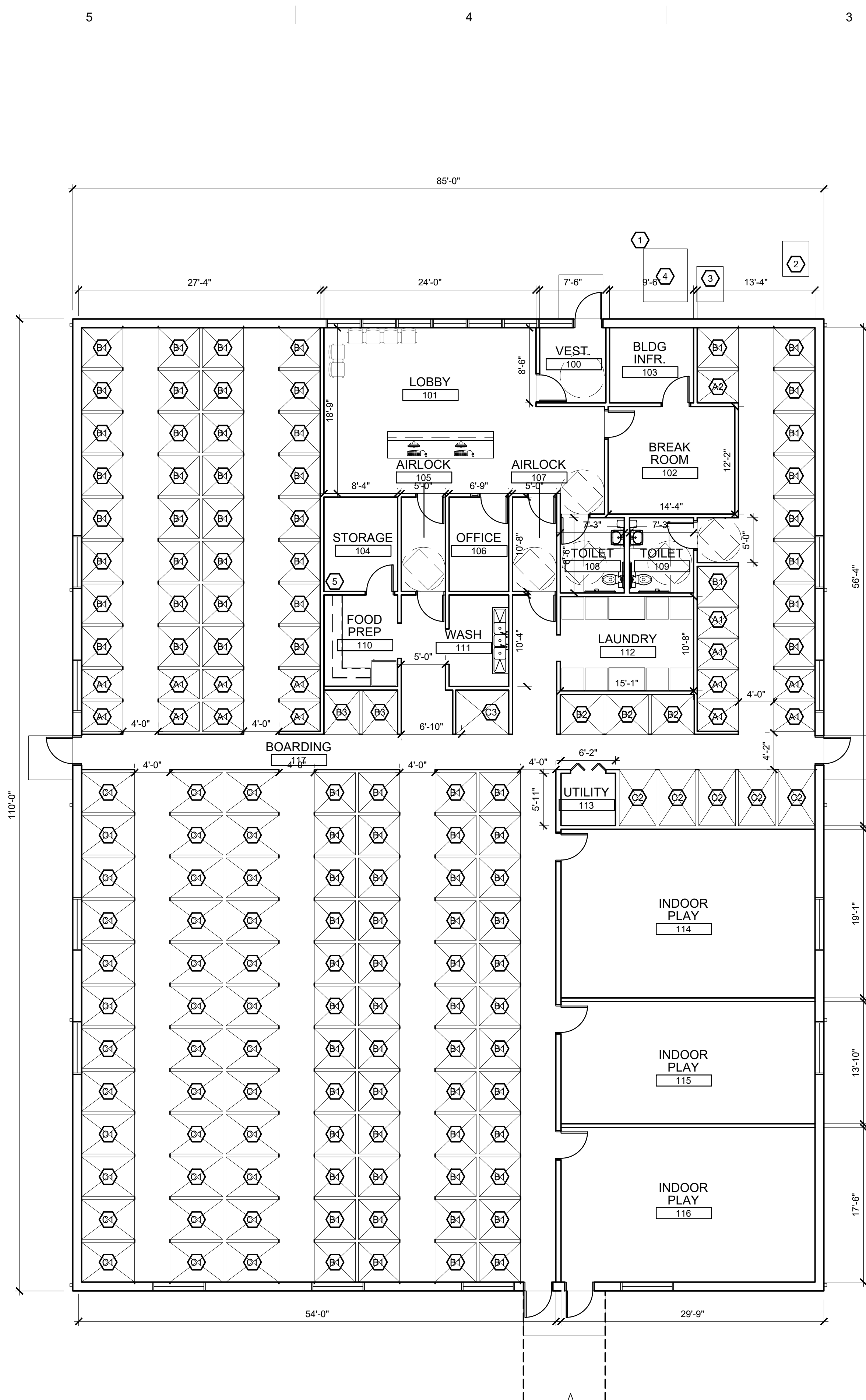
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Sheet Title:  
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SHEET INDEX, +  
LOCATOR PLAN

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1 FLOOR PLAN  
SCALE: 1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES:

- THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE SET OF WORK AS INDICATED AND SHALL FIELD VERIFY ALL WORK, COORDINATE ALL DRAWINGS / NEW WORK AND SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES.
- ALL DIMENSIONS ARE SHOWN FROM FINISH FACE TO FINISH FACE OF PARTITION UNLESS OTHERWISE NOTED.
- WALL THICKNESS ARE NOMINAL NOT ACTUAL DIMENSIONS. SEE WALL SCHEDULE FOR ACTUAL DIMENSIONS.
- ALL WOOD, INCLUDING BLOCKING, USED ON THE PROJECT SHALL BE FIRE RETARDANT TREATED.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE, COUNTY CODE REGULATIONS, O.S.H.A., AND THE AMERICAN WITH DISABILITIES ACT (ADA). REFER TO THE CODE PLAN FOR MORE INFORMATION.
- PROVIDE POSITIVE SLOPE TO ALL FLOOR DRAINS WHILE KEEPING FLOOR LEVEL AT WALL BASE CONDITION.
- PROVIDE TRANSITION STRIPS AT EACH CHANGE IN FLOOR FINISH MATERIALS.
- PAINT, PATCH AND REPAIR THE FOLLOWING TO MATCH EXISTING MATERIALS: FLOOR, WALL, AND CEILING SURFACES AS REQUIRED ADJACENT TO AREAS BEING DEMOLISHED. REFER TO DEMOLITION DRAWINGS FOR MORE INFORMATION.
- REINFORCE WALL AND PROVIDE BLOCKING AS REQUIRED TO SUPPORT WALL CABINETS AND COUNTERTOPS.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL WALL REINFORCING FOR INSTALLATION OF ACCESSORIES, COAT RACKS, CHART RACKS, CASEWORK, AND OTHER WALL MOUNTED ITEMS.
- CLEAN AND REPAIR ALL EXISTING FLOOR FINISHES AS NECESSARY.
- ALL EXPOSED PIPES, DUCTS, AND CONDUIT TO BE PAINTED TO MATCH EXISTING.
- PROVIDE CONTROL JOINTS IN GYPSUM BOARD PARTITIONS AT 30'-0" O.C. MAXIMUM AND AS INDICATED IN THE CONTRACT DOCUMENTS.
- COORDINATE WITH OWNER'S EQUIPMENT SUPPLIER FOR INSTALLATION REQUIREMENTS / LOCATIONS OF FLOOR / WALL / CEILING MOUNTED ITEMS, IE. CAMERAS, TV'S, SPEAKERS, SENSORS, SECURITY WIRING, VAULTS, ATMS.
- CONTRACTOR SHALL CONDUCT A ROUGH ELECTRICAL INSPECTION WITH OWNER, PRIOR TO ENCLOSING WALLS, FOR THE PURPOSE OF CONFIRMING ALL J-BOX LOCATIONS FOR POWER, DATA, VOICE, SWITCH, THERMOSTAT, ETC.
- CONTRACTOR TO FILL ANY AND ALL EQUIPMENT PENETRATIONS OR DEPRESSIONS INTO OR THROUGH THE EXISTING SLAB THAT WILL NOT BE UTILIZED TO FEED NEW EQUIPMENT (I.E. ABANDONED FLOOR CORES, IMPRESSION FROM PREVIOUS EQUIPMENT FLOOR PLATE REMOVAL). PENETRATIONS SHALL BE FILLED WITH NON-SHRINK GROUT. THE SIDES OF ANY EXISTING OPENINGS SHALL BE MODIFIED/TAPERED SO THAT THEY ARE WIDER AT THE TOP THAN AT THE BOTTOM. FOR LARGE OPENINGS, PROVIDE ONE (1) #5 BAR 2" UP FROM BOTTOM OF HOLE.
- A TACTILE SIGN STATING 'EXIT' AND COMPLYING WITH ICC-A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN 'AREA OF REFUGE', AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIT STAIRWAY, AN EXIT RAMP, AN EXIT PASSAGEWAY, AND THE EXIT DISCHARGE.
- PROVIDE PERMANENT MIN 3-INCH HIGH CONTRASTING COLOR MARKING AND IDENTIFICATION AT ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS, SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS WITHIN 15 FEET AT THE END OF EACH WALL, AND NOT EXCEEDING 30 FEET MAXIMUM HORIZONTAL INTERVALS. MINIMUM 2 LOCATIONS EACH WALL. TYPICAL FOR ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING, OR ATTIC SPACES PER CODE (MBC 703.7)

FLOOR PLAN KEY LEGEND:

- 1 REFER TO LANDSCAPE PLAN FOR SCREENING
- 2 NEW BUILDING TRANSFORMER
- 3 MAKE UP AIR UNIT
- 4 GROUND MTD RTU
- 5 LADDER TO STORAGE MEZZANINE ABOVE

KENNEL MATRIX:

- A1 14 SMALL - 4'-8" X 3'-4"
- A2 1 SMALL - 4'-8" X 3'-8"
- B1 90 MEDIUM - 4'-8" X 4'-6"
- B2 3 MEDIUM - 4'-10" X 4'-6"
- B3 2 MEDIUM - 5'-0" X 4'-0"
- C1 36 LARGE - 6'-0" X 4'-6"
- C2 5 LARGE - 6'-4" X 4'-2"
- C3 1 LARGE - 6'-0" X 5'-0"
- 152 TOTAL



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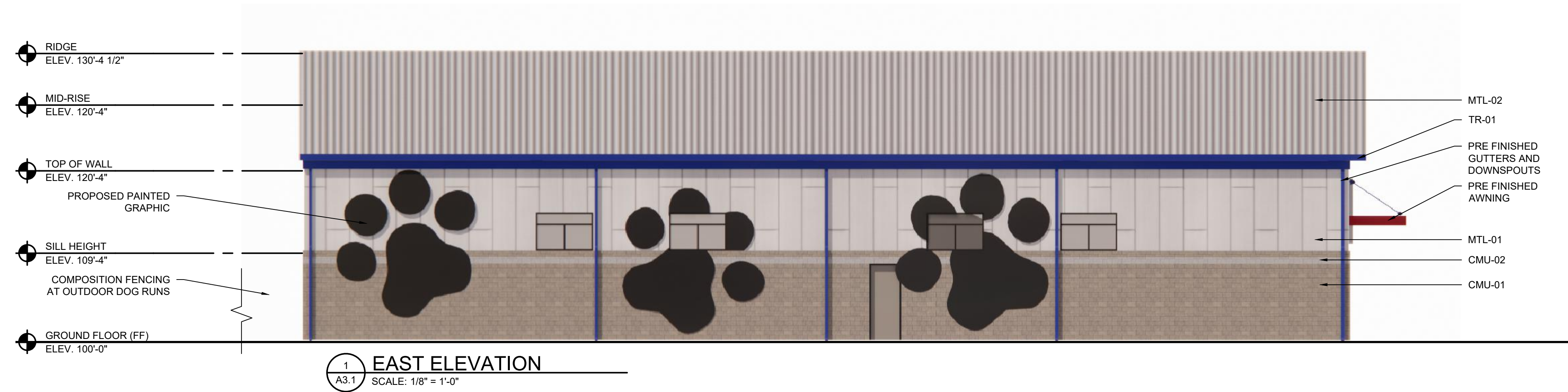
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FLOOR PLAN

Project No. :  
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Sheet No. :  
A1.1

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LIST OF MATERIALS	
CMU-01	DESCRIPTION: INTEGRAL COLOR MASONRY TYPE: SPLIT FACE COLOR: FAWN
CMU-02	DESCRIPTION: INTEGRAL COLOR MASONRY TYPE: SPLIT FACE COLOR: CHARDONNAY
MTL-01	DESCRIPTION: PREFINISHED FLAT FACE METAL PANEL COLOR: ALABASTER
MTL-02	DESCRIPTION: STANDING SEAM METAL ROOFING COLOR: PURE WHITE
TR-01	DESCRIPTION: METAL TRIM COLOR: REGAL BLUE

FACADE MATERIAL PERCENTAGES	
CMU	32% TOTAL COVERAGE
MTL-01 FLAT METAL PANEL	38% TOTAL COVERAGE
MTL-02 STANDING SEAM METAL ROOF	24% TOTAL COVERAGE
TR-01 TRIM	6% TOTAL COVERAGE

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ELEVATIONS

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**A3.1**

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