



Skyzone JSP13-21

Skyzone, JSP13-21

Consideration of the request of Mode Development, Inc., for Preliminary Site Plan and Stormwater Management Plan approval. The subject property is located in Section 9 north of Magellan Drive and east of West Road in the I-1, Light Industrial District. The subject property is 6.26 acres and the applicant is proposing to construct an 80,230 square foot building with associated parking and landscaping. Approximately half of the building will be used as an indoor trampoline center and the remaining space will be speculative office and manufacturing space.

REQUIRED ACTION

Approval/denial of the Preliminary Site Plan and Stormwater Management Plan.

REVIEW	RESULT	DATE	COMMENTS
Planning	Approval recommended	08-19-13	<ul style="list-style-type: none"> • Planning Commission finding that the front yard parking is compatible with surrounding developments is required • Variance required for the underage of required parking spaces (staff supported) • Items to address on the Final Site Plan
Engineering	Approval recommended	08-06-13	Items to address on the Final Site Plan
Traffic	Approval recommended	06-28-13	<ul style="list-style-type: none"> • Planning Commission waiver for same-side driveway spacing required (105 ft. required, 57 ft. provided) • Items to address on the Final Site Plan
Landscaping	Approval recommended	07-30-13	Items to address on the Final Site Plan
Facade	Approval recommended	07-01-13	<ul style="list-style-type: none"> • Section 9 waiver recommended for the overage of ribbed metal panels on the north elevation • Items to address on the Final Site Plan
Fire	Approval recommended	08-08-13	Items to address on the Final Site Plan

Motion sheet

Approval – Preliminary Site Plan

In the matter of Skyzone, JSP13-21, motion to **approve** the Preliminary Site Plan based on and subject to the following:

- a. Planning Commission finding that the proposed front yard parking is compatible with surrounding development, which is hereby made;
- b. Planning Commission waiver for same-side driveway spacing (105 feet required, 57 feet provided), which is hereby granted;
- c. Section 9 façade waiver for the overage of ribbed metal panels on the north elevation, which is hereby granted;
- d. The findings of compliance with Ordinance standards in the staff and consultant review letters and the conditions and items listed in those letters being addressed on the Final Site Plan; and
- e. *(additional conditions here if any)*

(This motion is made because it is otherwise in compliance with Article 19, Article 24 and Article 25 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)

-AND -

Approval – Stormwater Management Plan

In the matter of Skyzone, JSP13-21, motion to **approve** the Stormwater Management Plan, based on and subject to:

- a. The findings of compliance with Ordinance standards in the staff and consultant review letters and the conditions and items listed in those letters being addressed on the Final Site Plan; and
- b. *(additional conditions here if any)*

(This motion is made because it otherwise in compliance with Chapter 11 of the Code of Ordinances and all other applicable provisions of the Ordinance.)

-OR -

Denial

In the matter of Skyzone, JSP13-21 motion to **deny** the Preliminary Site Plan, for the following reasons...(because the plan is not in compliance with Article 19, Article 24 and Article 25 of the Zoning Ordinance.)

-AND -

Denial Storm Water Management Plan

In the matter of Skyzone, JSP13-21, motion to **deny** the Stormwater Management Plan, for the following reasons...(because the plan is not in compliance with Chapter 11 of the Ordinance.)

PLANNING REVIEW



PLAN REVIEW CENTER REPORT

July 1, 2013

Updated August 19, 2013

Planning Review

Skyzone

JSP13-21

Petitioner

Mode Development, Inc.

Review Type

Revised Preliminary Site Plan

Property Characteristics

- Site Location: North of Magellan Drive, east of West Road (Section 9)
- Site Zoning: I-1, Light Industrial
- Adjoining Zoning: North, South, East: I-1; West (City of Wixom): M-1, Light Industrial
- Current Site Use: Vacant
- Adjoining Uses: North: Vacant; South, East and West: Various office/industrial
- School District: Walled Lake District
- Site Size: 6.26 acres
- Plan Date: 06-24-13

Project Summary

The applicant is proposing to construct an 80,230 square foot building with associated parking and landscaping on two vacant parcels north of Magellan Drive and east of West Road. Approximately 25,600 sq. ft. would be used for an indoor recreational use (Skyzone indoor trampoline center) with the remaining space (approx. 48,198 sq. ft.) as speculative office and manufacturing.

The applicant has submitted information to determine maximum building occupancy, an updated landscape plan and stormwater management plan as those items were missing from the previous revised Preliminary Site Plan submittal. This letter has been updated to incorporate those submissions.

Recommendation

Staff does recommends approval of the revised Preliminary Site Plan. This project may proceed to the Planning Commission for consideration of the Preliminary Site Plan and Stormwater Management Plan. There are several issues identified below and in the attached review letters to be addressed on the Final Site Plan submittal.

Ordinance Requirements

This project was reviewed for conformance with the Zoning Ordinance with respect to Article 19 (Light Industrial District), Article 24 (Schedule of Regulations), Article 25 (General Provisions) and any other applicable provisions of the Zoning Ordinance. Items in **bold** below must be addressed by the applicant or the Planning Commission.

1. **Parking in the Front Yard:** A Planning Commission finding that the proposed front yard parking is compatible with the surrounding developments is required. Front yard parking in the I-1 District requires the parking not occupy more than 50% of the area between the minimum front yard setback and actual building setback. It appears the plan meets this requirement. **The applicant should provide calculations on the plan set confirming the percentage of area occupied by the front yard parking.** Additionally, the front yard parking must be screened by a brick wall or landscaped berm. A berm has been proposed along Magellan Drive.

2. Parking Spaces: The required number of parking spaces for the entire site is 290 spaces. The plan indicates 230 spaces. The applicant has submitted a parking study from an existing Skyzone location along with supporting information indicating 3 parking spaces per 1,000 sq. ft. for the indoor recreational use is sufficient. Under this assumption, the site would only need 121 parking spaces. **The applicant should apply for and staff would support a variance for the required number of parking spaces.**
3. Dumpster Enclosure: A dumpster enclosure must be at least 1' taller than the proposed dumpster and constructed of materials to match the proposed building. **The applicant should provide a note on the plan indicating the height of the proposed dumpster.** The dumpster enclosure material must match the building façade.
4. Exterior Lighting: An exterior lighting plan must be submitted with the Final Site Plan.
5. Fire Review: Additional hydrants are required. **This item must be addressed on the Final Site Plan submittal.**
6. Property Combination: The applicant must create this parcel prior to Stamping Set approval. Plans will not be stamped until the parcel is created. If a property combination is not planned, variances as identified in the planning review chart will be required.
7. Condominium Creation: It appears a general condominium may be proposed for the site. **The applicant should clarify this.** Condominium documents must be submitted for review prior to Stamping Set approval.
8. Signage: Exterior Signage is not regulated by the Planning Division or Planning Commission. Please contact Jeannie Niland (248.347.0438) for information regarding sign permits.

Site Addressing

The applicant should contact the Building Division for an address prior to applying for a building permit. Building permit applications cannot be processed without a correct address. The address application can be found on the Internet at www.cityofnovi.org under the forms page of the Community Development Department.

Please contact Jeannie Niland [248.347.0438] in the Community Development Department with any specific questions regarding addressing of sites.

Pre-Construction Meeting

Prior to the start of any work on the site, Pre-Construction (Pre-Con) meetings must be held with the applicant's contractor and the City's consulting engineer. Pre-Con meetings are generally held after Stamping Sets have been issued and prior to the start of any work on the site. There are a variety of requirements, fees and permits that must be issued before a Pre-Con can be scheduled. If you have questions regarding the checklist or the Pre-Con itself, please contact Sarah Marchioni [248.347.0430] or smarchioni@cityofnovi.org in the Community Development Department.

Chapter 26.5

Chapter 26.5 of the City of Novi Code of Ordinances generally requires all projects be completed within two years of the issuance of any starting permit. Please contact Sarah Marchioni at 248-347-0430 for additional information on starting permits. The applicant should review and be aware of the requirements of Chapter 26.5 before starting construction.

Response Letter

A letter from either the applicant or the applicant's representative addressing comments in this and other review letters is required with the next plan submittal.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.347.0586 or kkapelanski@cityofnovi.org.



Kristen Kapelanski, AICP, Planner

PLANNING REVIEW SUMMARY CHART

Skyzone JSP13-21
 Revised Preliminary Site Plan Review
 Plan Date: 06/24/13

Item	Required	Proposed	Meets Requirements?	Comments
Master Plan	Industrial Research Development Technology	No Change Proposed	Yes	
Zoning	I-1 Light Industrial District	No Change Proposed	Yes	
Use (Article 19)	Office, research & development, technology centers, warehousing, manufacturing, laboratories, utility buildings, indoor/outdoor recreation, other similar uses, and accessory structures	25,569 sq. ft. indoor recreation (trampoline) use 48,198 sq. ft. speculative office/manufacturing use	Yes	
Building Height (Sec. 2400 & Sec. 2503.2.E)	40 feet maximum	31 feet to top of masonry, rooftop screening not indicated	Yes	Any rooftop equipment will need to be screened.
Building Setback (Sec. 2400)				
Front (east)	40 ft.	85 ft.	Yes	Property lines should be clearly shown. A property line is shown through the center of the proposed building. This will require a variance from the Zoning Board of Appeals if the parcels are not combined. It appears a combination with condominium creation is proposed. The applicant should confirm this will be a general condominium.
Interior Side (north)	20 ft.	100 ft.	Yes	
Interior Side (south)	20 ft.	61 ft.	Yes	
Rear (west)	20 ft.	64 ft.	Yes	
Parking Setback (Sec. 2400)				
Front (east)	Front yard parking permitted subject to (a) Dev. must be 2 acres (b) Must be setback same as req.	(a) Combined parcels are 60.24 acres (b) Setback 51 ft. (c) Calculations not provided	Yes	Planning Commission finding that parking is compatible with surrounding development is required. Applicant should provide

Item	Required	Proposed	Meets Requirements?	Comments
	<p>bldg. setback (40 ft.)</p> <p>(c) Cannot occupy more than 50% of the area btwn. min. front yard setback and bldg. setback</p> <p>(d) Must be screened by brick wall or landscaped berm</p> <p>(e) Planning Commission must make finding that prkg. area and lighting is compatible w/ surrounding development</p>	(d) Landscaped plan indicate berm provided		calculations indicating the percentage of area between the front yard setback and building setback that is occupied by parking.
Interior Side (north)	10 ft.	12 ft.	Yes	
Interior Side (south)	10 ft.	10 ft.	Yes	
Rear (west)	10 ft.	10 ft.	Yes	
Number of Parking Spaces (Sec. 2505)	<p><u>Indoor Recreation</u> (25,596 sq. ft.): one space per each 2 persons allowed under maximum occupancy = occupancy established with the Bldg. Division - 390 persons = 195 spaces</p> <p><u>Speculative Office</u> (8,500 sq. ft.) one space per 222 of GLA = 38 spaces</p> <p><u>Speculative Manufacturing</u> (39,698 sq. ft.)</p>	230 spaces	No	<p>The applicant has submitted additional documentation including a parking study for an existing Skyzone location. This information indicates approximately 3 parking spaces per 1,000 sq. ft. is sufficient for the proposed indoor recreation use.</p> <p>Staff would support and the applicant should apply for a variance from the Zoning Board of Appeals for the required number of parking spaces.</p>

Item	Required	Proposed	Meets Requirements?	Comments
	<p>one space per 700 sq. ft. usable floor area = 57 spaces</p> <p>195 spaces + 38 spaces + 57 spaces = 290 spaces</p>			
Parking Space Dimensions and Maneuvering Lanes (Sec. 2506)	9' x 19' parking space dimensions and 24' wide drives. 9' x 17' parking spaces allowed along 7' wide interior sidewalks as long as detail indicates a 4" curb at these locations and along landscaping.	<p>9' x 19' interior spaces provided</p> <p>9' X 17' spaces provided around perimeter</p> <p>24' access aisles provided</p>	Yes	
Barrier Free Spaces (Barrier Free Code)	7 barrier free spaces required (2 van accessible)	7 barrier free spaces (2 van accessible) provided	Yes	
Barrier Free Space Dimensions (Barrier Free Code)	8' wide with a 5' wide access aisle for standard barrier free spaces, and 8' wide with an 8' wide access aisle for van accessible spaces	8' wide with a 5' wide access aisles for standard barrier free spaces	Yes	
Barrier Free Signs (Barrier Free Design Graphics Manual)	One sign for each accessible parking space.	Signage indicated	Yes	
Loading Spaces (Sec. 2507)	Must be in rear yard and screened from right-of-way and neighboring properties - minimum 360 sq. ft.	840 sq. ft. of loading space provided in rear yard	Yes	
Accessory Structure Setback-Dumpster (Sec. 2503)	Accessory structures should be setback a minimum of 10 feet from any building unless structurally attached and setback the same as parking from all	Dumpsters in the rear yard and setback appropriately	Yes	

Item	Required	Proposed	Meets Requirements?	Comments
	property lines; the structure must be in the rear or interior side yard.			
Dumpster (Chap. 21, Sec. 21-145)	Screening of not less than 5 feet required, interior bumpers or posts required. Enclosure to match building materials and be at least one foot taller than height of refuse bin.	5' enclosure with interior posts. Finish material not indicated?	No	Applicant should confirm enclosure will be at least 1' taller than proposed dumpsters. Screening material must match building.
Exterior lighting (Sec. 2511)	Photometric plan and exterior lighting details needed at time of Final Site Plan	Lighting plan not submitted		Lighting plan is required for Final Site Plan review.
Sidewalks (City Code Sec. 11-276(b) and Subdivision Ordinance Sec. 4.05A and Non-Motorized Plan)	A 5'-8' wide sidewalk shall be constructed along all major thoroughfares <u>and</u> <u>collectors</u> per DCS, but not along industrial service streets per Subdivision Ordinance Building exits must be connected to sidewalk system or parking lot.	No sidewalk provided Building entrances connected to parking lot and BF ramps.	Yes	
Development/ Business Sign	Signage requires a permit.			Please contact Jeannie Niland (248.347.0438) for information on sign permits

Prepared by Kristen Kapelanski, AICP (248)347-0586

ENGINEERING REVIEW



PLAN REVIEW CENTER REPORT

August 6, 2013

Engineering Review

Skyzone Novi
JSP13-0021

Petitioner

Model Development, Inc., applicant

Review Type

Revised Preliminary Site Plan

Property Characteristics

- Site Location: N. of Magellan Dr. at Novi/Wixom border
- Site Size: 6.26 acres
- Plan Date: July 31, 2013

Project Summary

- Construction of an approximately 25,569 square-foot building and associated parking. Site access would be provided two access points off of Magellan Dr.
- Water service would be provided by a domestic lead and a fire lead to serve the building. Additional hydrants may be required per the City of Novi Fire Marshall's recommendation.
- Sanitary sewer service would be provided a sanitary lead and monitoring manhole off of the 8-inch sanitary sewer adjacent to Magellan Dr.
- Storm water would be collected by a single storm sewer collection system, detained for the first flush storm event and discharged into the North Novi drainage district through the existing storm sewer in the rear yard of the development.

Recommendation

Approval of the Preliminary Site Plan and Preliminary Storm Water Management Plan is recommended.

Comments:

The Preliminary Site Plan meets the general requirements of Chapter 11, the Storm Water Management Ordinance and the Engineering Design Manual with the following items to be addressed at the time of Final Site Plan submittal (further engineering detail will be required at the time of the final site plan submittal):

Additional Comments (to be addressed prior to the Final Site Plan submittal):

General

1. Provide a note on the plans that all work shall conform to the current City of Novi standards and specifications.
2. The City standard detail sheets are not required for the Final Site Plan submittal. They will be required with the Stamping Set submittal.
3. **Differentiate between existing and proposed utilities** on the plans and indicate proposed connections. This should include diameter, material type, inverts, and any other applicable information.
4. Revise the plan set legend to distinguish between different line types.
5. Submit a completed Non-Domestic User Survey to Community Development.

Water Main

6. Provide the diameter, material type, and valve location for the proposed domestic lead and the proposed fire lead.
7. Provide the water main location, material type, diameter, and profile for the proposed fire hydrant relocation.
8. If any additional fire hydrants are proposed, provide a profile for the proposed water main indicating a minimum cover of five and one-half (5½) feet.
9. If any additional fire hydrants are proposed, submit three (3) sealed sets of revised utility plans along with the MDEQ permit application (1/07 rev.) for water main construction and the Streamlined Water Main Permit Checklist should be submitted to the Engineering Department for review, assuming no further design changes are anticipated. Utility plan sets shall include only the cover sheet, any applicable utility sheets and the standard detail sheets.

Sanitary Sewer

10. Provide an access easement for the sanitary sewer monitoring manhole or relocate the monitoring manhole within the existing sanitary sewer easement adjacent to Magellan Dr.

Storm Sewer

11. Provide a profile of the proposed storm sewer showing a minimum cover of 3 feet and all catch basin sumps. Indicate all structure types, diameter and the 10-year hydraulic grade line for the storm sewer.

Storm Water Management Plan

12. The SWMP must detail the storm water system design, calculations, details, and maintenance as stated in the ordinance. The SWMP must address the discharge of storm water off-site, and evidence of its adequacy must be provided. This should be done by comparing pre- and post-development discharge rates and volumes. The area being used for this off-site discharge should be delineated and the ultimate location of discharge shown.
13. Provide calculations detailing how the proposed outlet control structure will restrict storm water in the sedimentation basin.
14. Denote an overland route for storm water that would occur in the event that the detention basin cannot accept flow. This route shall be directed to a recognized drainage course or drainage system. Verify that any structures accepting overland flow are capable of handling the 100-year flood capacity.
15. An adequate maintenance access route to the basin outlet structure and any other pretreatment structures shall be provided (15 feet wide, maximum slope of 1V:5H, and able to withstand the passage of heavy equipment). Verify the access route does not conflict with proposed landscaping.
16. Provide an oil/ gas separator with a four foot sump at the last storm sewer structure prior to discharge into the proposed basin.

Paving & Grading

17. Provide a proposed grading plan for the development. This plan must denote the proposed drainage pattern for the development.
18. Provide details for the proposed pavement cross-section(s).

The following must be submitted at the time of Final Site Plan submittal:

1. A letter from either the applicant or the applicant's engineer must be submitted with the Final Site Plan highlighting the changes made to the plans addressing each of the comments listed above and indicating the revised sheets involved.
2. An itemized construction cost estimate must be submitted to the Community Development Department at the time of Final Site Plan submittal for the determination of plan review and construction inspection fees. This estimate should only include the civil site work and not any costs associated with construction of the building or any demolition work. The cost estimate must be itemized for each utility (water, sanitary, storm sewer), on-site paving, right-of-way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pretreatment structure and restoration).

The following must be submitted at the time of Stamping Set submittal:

3. A draft copy of the maintenance agreement for the storm water facilities, as outlined in the Storm Water Management Ordinance, must be submitted to the Community Development Department with the Final Site Plan. Once the

form of the agreement is approved, this agreement must be approved by City Council and shall be recorded in the office of the Oakland County Register of Deeds.

4. A draft copy of the 20-foot wide easement for the water main to be constructed on the site must be submitted to the Community Development Department.
5. A draft copy of the 20-foot wide access easement for the sanitary sewer monitoring manhole must be submitted to the Community Development Department.

The following must be addressed prior to construction:

6. A pre-construction meeting shall be required prior to any site work being started. Please contact Sarah Marchioni in the Community Development Department to setup a meeting (248-347-0430).
7. A City of Novi Grading Permit will be required prior to any grading on the site. This permit will be issued at the pre-construction meeting. Once determined, a grading permit fee must be paid to the City Treasurer's Office.
8. An NPDES permit must be obtained from the MDEQ because the site is over 5 acres in size. The MDEQ requires an approved plan to be submitted with the Notice of Coverage.
9. A Soil Erosion Control Permit must be obtained from the City of Novi. Contact Sarah Marchioni in the Community Development Department (248-347-0430) for forms and information.
10. A permit for work within the right-of-way of Magellan Dr. must be obtained from the City of Novi. The application is available from the City Engineering Department and should be filed at the time of Final Site Plan submittal. Please contact the Engineering Department at 248-347-0454 for further information.
11. A permit for work within the right-of-way of Magellan Dr. must be obtained from the City of Wixom. Please contact the City of Wixom Department of Public Works at (248) 624-0141 for further information.
12. A permit for water main construction must be obtained from the MDEQ. This permit application must be submitted through the City Engineer after the water main plans have been approved.
13. Construction Inspection Fees to be determined once the construction cost estimate is submitted must be paid prior to the pre-construction meeting.
14. Partially restricted discharge into a regional detention basin is planned for this site. Therefore, a storm water tap fee will be required prior to the pre-construction meeting. An exact figure will be determined at the time of Final Site Plan approval.

15. A storm water performance guarantee, equal to 1.5 times the amount required to complete storm water management and facilities as specified in the Storm Water Management Ordinance, must be posted at the Treasurer's Office.
16. An incomplete site work performance guarantee for this development will be calculated (equal to 1.5 times the amount required to complete the site improvements, excluding the storm water facilities) as specified in the Performance Guarantee Ordinance. This guarantee will be posted prior to TCO, at which time it may be reduced based on percentage of construction completed.
17. A street sign financial guarantee in an amount to be determined (\$400 per traffic control sign proposed) must be posted at the Treasurer's Office.
18. Permits for the construction of each retaining wall must be obtained from the Community Development Department (248-347-0415).

Please contact Adam Wayne at (248) 735-5648 with any questions.

A handwritten signature in black ink, appearing to read "Adam Wayne", is written over a horizontal line.

cc: Ben Croy, Engineering
Brian Coburn, Engineering
Kristen Kapelanski, Community Development Department
Michael Andrews, Water & Sewer Dept.

TRAFFIC REVIEW

June 28, 2013

Barbara McBeth, AICP
Deputy Director of Community Development
City of Novi
45175 W. Ten Mile Rd.
Novi, MI 48375

**SUBJECT: Skyzone Novi, JSP13-0021, Revised Preliminary Site Plan, PSP13-0117,
Traffic Review**

Dear Ms. McBeth:

At your request, we have reviewed the above and offer the following recommendation and supporting comments.

Recommendation

We recommend approval of the revised preliminary site plan, subject to the items shown below in **bold** being satisfactorily addressed by the final site plan.

Site Description

What is the applicant proposing, and what are the surrounding land uses and road network?

1. The applicant is proposing a 54,634-s.f. light industrial building on the north side of Magellan Drive at the Novi-Wixom city limit. The site is bounded by developed industrial properties on three sides and the CSX Railroad on the fourth side. Two access drives are proposed very close to existing drives, but both appear necessary in the absence of cross access to the neighboring site in Novi.

Trip Generation

How much new traffic would be generated?

2. If the proposed 54,634-s.f. light-industrial building were to be dedicated entirely to that general use, it could be expected to generate about 306 one-way vehicle trips per day, 50 in the AM peak hour (44 entering and 6 exiting) and 53 in the PM peak hour (6 entering and 53 exiting). We understand that a portion of the building will be used differently, but have no basis for providing a more realistic trip generation forecast. We recommend that the Planning Commission ask the applicant to discuss the proposed building uses and the trip generation that the applicant would expect for those uses.

Vehicular Access Locations

Do the proposed "driveway" locations meet City spacing standards?

3. No. The east access drive would be about 57 ft from the nearest existing drive (back-of-curb to back-of-curb, measured at Magellan's north curb). A Planning Commission waiver of the City's minimum same-side driveway spacing (105 ft for a 25-mph roadway, per Sec 11-216(d)(1)d of the Design and Construction Standards) will therefore be required.
4. The west drive now aligns with the existing drive on the south side of Magellan, eliminating both the left-turn interlock and curb-return encroachment present on earlier plans.

Vehicular Access Improvements

Will there be any improvements to the abutting road(s) at the proposed access point(s)?

5. No, and none are required.

Access Drive Design and Control

Are the proposed design, pavement markings, and signage satisfactory?

6. The 24-inch STOP (R1-1) sign proposed on each driveway's approach to Magellan Drive (per our earlier request) should be relocated closer to Magellan, the west sign by 12 ft and the east sign by 15 ft.

Pedestrian Access

Are pedestrians safely and reasonably accommodated?

7. Pedestrian access from/to Magellan Drive is not an issue given the lack of sidewalks along that street. Internal pedestrian routes, between the barrier-free parking spaces and the main building entrances, have been improved and now meet ADA guidelines for accessible routes.

Circulation and Parking

Can vehicles safely and conveniently maneuver through the site?

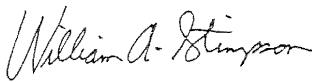
8. The west parking field has been substantially redesigned per our suggestions of May 22, 2013, and we appreciate the applicant's cooperation in significantly reducing the site's impervious surface area.
9. Per comment 6 in our pre-application review and comment 11 in our May 22 review of the preliminary site plan:
 - a. Nearly all back-of-curb radii should be dimensioned. The only standard exceptions are minor radii (5 ft or less), which can be dimensioned in selective locations and noted as "typical." (The engineer is welcome to utilize our attached standard end island detail.)

- b. Elevation data should show that curbs at the ends of parking spaces will be 4 inches high (notes indicating this curb height have been added, but elevation data are needed for reviewing this requirement as well as several other engineering items).
10. The triangular painted (crosshatched) portion of the island in the east parking lot should be replaced by raised landscape island. To ensure that vehicles parking in opposing spaces at the narrowest (south) part of this triangular island do not hit each other upon overhanging the two curbs, the narrowest part of the island should be at least 4 ft wide (back-to-back). The required widening of the overall island should be feasible given the currently proposed excessive aisle widths (27 ft west and 41 ft east) and ample space available for truck circulation. The south end of the enlarged island should be equipped with semicircular rounding.
11. Parking Note 2 should be further refined to read "The striping of all undesignated (non-barrier-free) parking spaces will be white."
12. Loading Zone Note 2 should be further refined to read "NO PARKING LOADING ZONE (R7-6) signs shall be mounted on the building façade at a height of 5-7 ft."
13. A detail for the barrier-free signage must be added. This detail should show both the main RESERVED PARKING [wheelchair symbol] ONLY sign – labeling it as a R7-8 – and the supplemental VAN ACCESSIBLE sign – labeling it as a R7-8P and indicating that it is "to be used at all barrier-free spaces adjacent to 8-ft-wide access aisles." The detail should further dimension the main sign as being 7'-0" above grade and the supplemental sign as being at least 6'-3" above grade.
14. A plan note must be added indicating that "All pavement markings, traffic control signs, and parking signs shall comply with the design and placement requirements of the 2011 *Michigan Manual on Uniform Traffic Control Devices*."
15. A Signing Quantities Table must be added, listing each sign type by description and MMUTCD sign code, and indicating the total quantity of each sign type required by the site plan. To ensure use of the desired size of STOP sign, the table should indicate that these two signs will each be 24" x 24".

Sincerely,
CLEARZONING, INC.



Rodney L. Arroyo, AICP
President

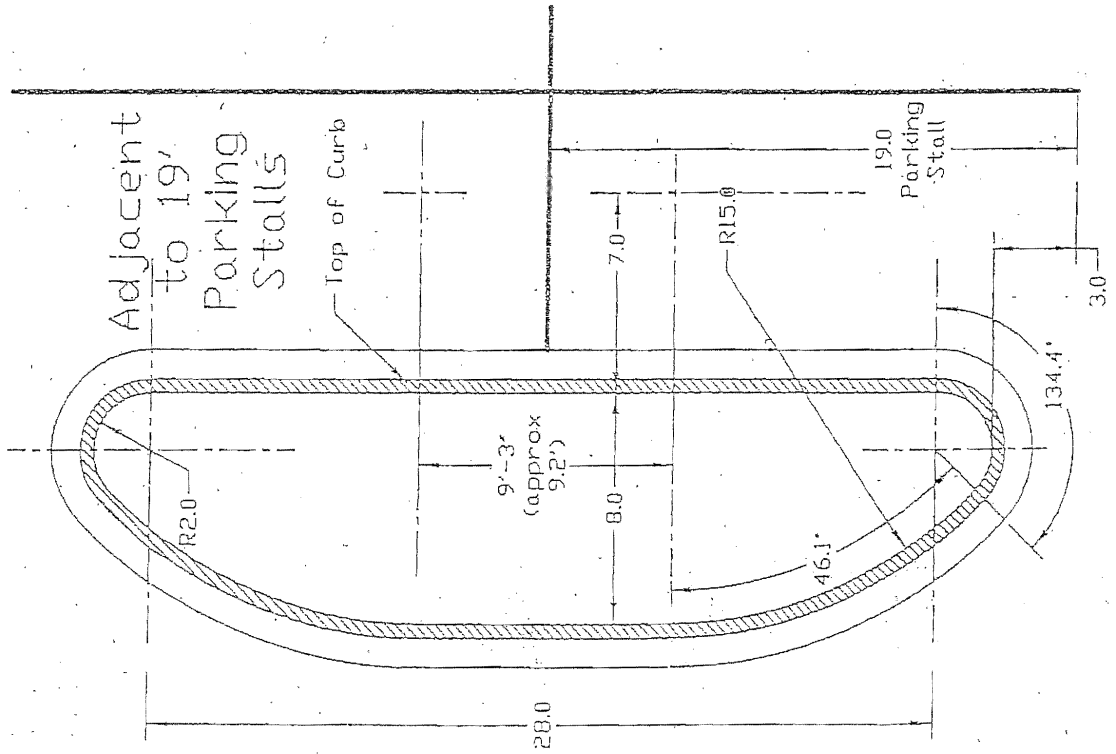


William A. Stimpson, P.E.
Director of Traffic Engineering

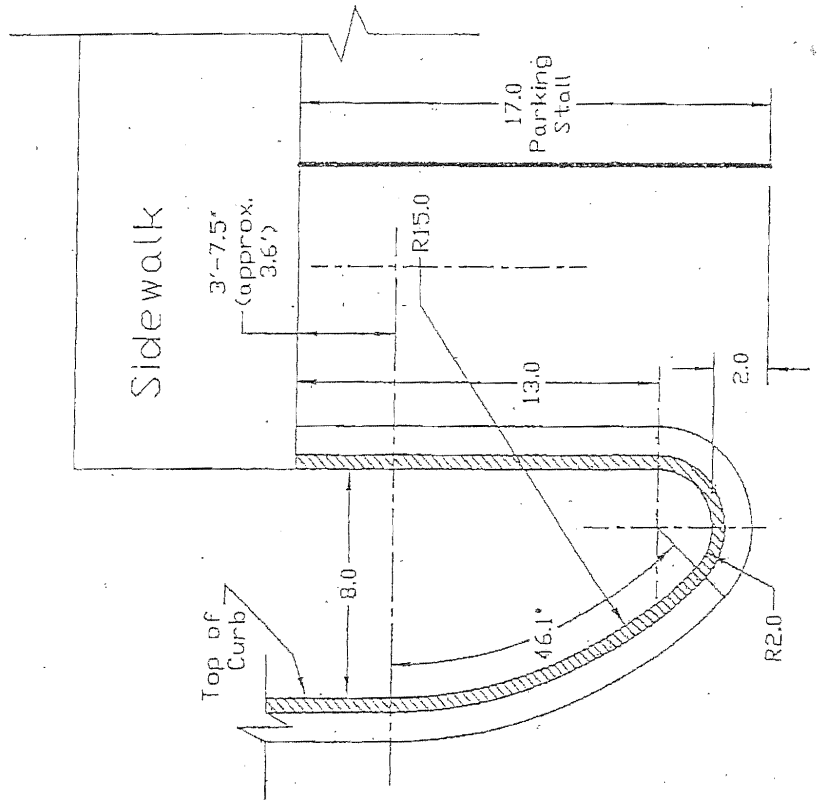
Attachment: Novi Standard Parking Island Design

Standard Parking Island Design

with minimum 8' width



Adjacent to a 17' Parking Stall



LANDSCAPE REVIEW



PLAN REVIEW CENTER REPORT
July 30, 2013
Revised Preliminary Landscape Review
Skyzone – PSP13-21

Petitioner

Mode Development, Inc.

Review Type

Preliminary Site Plan

Property Characteristics

Site Location: North of Magellan Drive, east of West Road (Section 9)
Site Zoning: I-1, Light Industrial
Adjoining Zoning: North, South, East: I-1; West (City of Wixom): M-1, Light Industrial
Current Site Use: Vacant
Adjoining Uses: North: Vacant; South, East and West: Various office/industrial
School District: Walled Lake District
Site Size: 6.26 acres
Plan Date: 6/27/13

Recommendation

Approval of the revised Preliminary Site Plan for Skyzone PSP13-21 is recommended.

Ordinance Considerations

Adjacent to Residential – Buffer (Sec. 2509.3.a.)

1. The project site is not adjacent to residential property.

Adjacent to Public Rights-of-Way – Berm (Wall) & Buffer (Sec. 2509.3.b.)

1. A 3' tall landscape buffer berm is required along the Magellan Drive frontage. This requirement has been met.
2. One canopy tree per 40 l.f. is required along the frontage berm area. This requirement has been met.
3. One subcanopy tree per 35 l.f. is required along the frontage of Meadowbrook Road. This requirement has been met.

Street Tree Requirements (Sec. 2509.3.b.)

1. One street tree is required per 45 l.f. of road frontage. This requirement has been met.

Parking Landscape (Sec. 2509.3.c.)

1. Calculations have been provided for the required Parking Lot Landscape Area per Ordinance requirement. The Applicant is required to install a total of 3,047

- square feet of Interior Parking Lot Landscape Area. This requirement has been met.
2. A total of 41 Parking Lot Canopy Trees are required. This requirement has been met.
 3. Perimeter Parking Lot Canopy Trees are required at one per 35 LF. Existing healthy trees and trees counted toward interior parking lot landscape may be counted toward this requirement. By virtue of the existing and proposed trees, the Applicant meets the perimeter planting requirement.
 4. Some existing canopy trees are proposed to be relocated on the site. These trees will remain under warranty just as would any newly planted tree. The trees must be maintained indefinitely.

Building Foundation Landscape (Sec. 2509.3.d.)

1. A 4' wide landscape bed is required at the foundation with the exception of access areas. This requirement has been met.
2. A total of 9,120 s.f. of building foundation landscape area is required. This requirement has been met.

Plant List (LDM)

1. The Plant List meets the requirements of the Ordinance and Landscape Design Manual.

Planting Details & Notations (LDM)

1. Planting Details and Notations meet the requirements of the Ordinance and Landscape Design Manual.

Storm Basin Landscape (Sec. 2509.3.e.(4)) & LDM)

1. A total of 70% to 75% of storm basin rims are required to have a landscape buffer. This requirement has been met.

Irrigation (Sec. 2509 3.f.(6)(b))

1. All landscape areas are required to be irrigated. Please provide an irrigation plan with the stamping set submittal.

Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review is a summary and not intended to substitute for any Ordinance. For the landscape requirements, see the Zoning Ordinance landscape section on 2509, Landscape Design Manual and the appropriate items in the applicable zoning classification. Also see the Woodland and Wetland review comments.



Reviewed by: David R. Beschke, RLA

FACADE REVIEW



July 1, 2013

City of Novi Planning Department
 45175 W. 10 Mile Rd.
 Novi, MI 48375-3024

Attn: Ms. Barb McBeth – Director of Community Development

Re: FACADE ORDINANCE – Revised Preliminary Site Plan Review
 Skyzone, PSP13-0021 (REV2)
 Façade Region: 3, Zoning District: I-1, Building Size: 72,000 S.F.

Dear Ms. McBeth:

The following is the Façade Review for Revised Preliminary Site Plan Approval of the above referenced project based on the drawings prepared by Mode Development Incorporated, dated June 24, 2013. The percentages of materials proposed for each façade are as shown on the table below. The maximum percentages allowed by the Schedule Regulating Façade Materials of Ordinance Section 2520 are shown in the right hand column. Materials in non-compliance with the Façade Schedule, if any, are highlighted in bold.

Façade Region	South (Front)	North	East	West	Ordinance Maximum (Minimum)
Brick	53%	0%	4%	4%	75%
Split Faced CMU, Painted	0%	40%	39%	39%	75%
Ribbed Metal Panels	0%	60%	50%	50%	50%
Spandrel Glass	31%	0%	5%	5%	50%
EIFS	16%	0%	2%	2%	75%

As shown above the percentage of Ribbed Metal Panels is above the maximum percentage allowed by the Façade Ordinance on the north façade. No sample board was provided for this project. Although elevation views of the dumpster enclosure were not provided the plan is noted “split faced CMU to match exterior wall if

required by city ordinance.” The applicant should note that this is required by the Façade Ordinance. The text “if required by city ordinance” should therefore be deleted from the drawing.

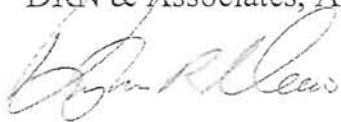
Recommendation – The comparatively small deviation from the Facade Ordinance does not adversely affect the aesthetic quality of the façade. It is our recommendation that the overall design is consistent with the intent and purpose of the Façade Ordinance and that a Section 9 Waiver be granted for the overage of Ribbed Metal Panels on the north elevation. This is contingent upon the applicant providing a sample board indicating carefully coordinated earth tone colors and elevation views of the dumpster enclosure prior to the Planning Commission meeting.

Notes to the Applicant: Façade Ordinance requires inspection(s) for all projects. Materials displayed on the approved sample board will be compared to materials delivered to the site. It is the applicant’s responsibility to request the inspection of each façade material at the appropriate time. Inspections may be requested using the Novi Building Department’s Online Inspection Portal with the following link. Please click on “Click here to Request an Inspection” under “Contractors”, then click “Façade”.

<http://www.cityofnovi.org/Services/CommDev/OnlineInspectionPortal.asp>.

If you have any questions regarding this project please do not hesitate to call.

Sincerely,
DRN & Associates, Architects PC



Douglas R. Necci, AIA

FIRE REVIEW



May 29, 2013

June 27, 2013

August 8, 2013

TO: Barbara McBeth, Deputy Director of Community Development

RE: **Skyzone**

PSP#: 13-0104

PSP# 13-0117

CITY COUNCIL

Mayor
Bob Gatt

Mayor Pro Tem
Dave Staudt

Terry K. Margolis

Andrew Mutch

Justin Fischer

Wayne Wrobel

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Clay J. Pearson

Director of Public Safety
Chief of Police
David E. Molloy

Director of EMS/Fire Operations
Jeffery R. Johnson

Assistant Chief of Police
Victor C.M. Lauria

Assistant Chief of Police
Jerrod S. Hart

Project Description:

An approx. 80,000sq. ft. commercial development located on Magellan Dr. in Section 9

Comments:

1. No part of a commercial, industrial or multiple residential areas shall be more than 300 feet from a hydrant. *Additional hydrants are required. Corrected 8/8/13*
2. Proximity to hydrant: In any building or structure required to be equipped with a fire department connection, the connection shall be located within one hundred (100) feet of a fire hydrant. *Doe's not meet the standard. Corrected 6/27/13*
3. Fire department connections shall be located on the street side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as otherwise approved by the code official. *Current location blocks access to the rear of the structure. Corrected 6/27/13*

Fire hydrant spacing shall be measured as "hose laying distance" from fire apparatus. Hose laying distance is the distance the fire apparatus travels along improved access routes between hydrants or from a hydrant to a structure

Recommendation:

Approved

Sincerely,

Joseph Shelton- Fire Marshal
City of Novi – Fire Dept.

cc: file

Novi Public Safety Administration
45125 W. Ten Mile Road
Novi, Michigan 48375
248.348.7100
248.347.0590 fax

cityofnovi.org

APPLICANT RESPONSE LETTER



Mode Development, Inc.

38700 Van Dyke • Suite 200 • Sterling Heights, MI 48312 • (586) 977-8640 • Fax (586) 977-7946

August 20, 2013

Kristen Kapelanski, Planner
City of Novi
Community Development – Planning Department
45175 W. Ten Mile Rd.
Novi, Michigan 48375

Re: Revised Preliminary Site Plan
Sky Zone – Novi, Magellan Drive

Dear Ms. Kapelanski:

On June 24, 2013, we submitted our revised preliminary site plan. On July 31, 2013, we supplemented said submission with a revised storm water management plan and revised landscape plan. On August 6, 2013, we further supplemented our submission with a revised site plan which reflected an additional fire hydrant. Per your request, this response letter only addresses those changes that were required for approval of the preliminary site plan review. This letter does not contemplate the changes already made to the plans in preparation for final site plan approval. Our responses to your comment letters are below.

We believe we have corrected the items necessary to satisfy the preliminary site plan requirements addressed in the *Plan Review Center Report - Planning Review updated August 19, 2013*, as follows:

1. Parking in the Front Yard: Front yard parking in the I-1 District requires parking not occupy more than 50% of the area between the minimum front yard setback and actual building setback. As requested, calculations have been added to Sheet SP-2, reflecting that the proposed parking only occupies 10% of the front yard. The proposed parking configuration is compatible with surrounding developments. In addition, the front yard parking is screened by a landscape berm as noted on Sheet SP-2; the comprehensive Landscape Improvement Plan was submitted July 31, 2013.
2. Parking Spaces: The City has determined that 290 parking spaces are required for the site. We will address the parking requirements accordingly.

3. **Dumpster Enclosure:** See revised site plan SP-2; modified as requested.
4. **Exterior Lighting:** Exterior lighting will be included with the final site plan submittal.
5. **Fire Review:** An additional hydrant was added to a parking lot island towards the east side of the building as required by Fire Marshal, Joe Shelton.
6. **Property Combination:** We are in the process of preparing documentation for parcel combination. Parcels will be combined prior to stamping set approval.
7. **Condominium Creation:** A general condominium is **NOT** intended. This is a multi-building owned by a single landlord/property manager.
8. **Signage:** Permits for exterior signage are the responsibility of the Tenant.

Site Address

With respect to the site address, an Address Request Form was submitted August 1, 2013; however, the Planning Division indicated that the addresses for the (2) tenant spaces would not be issued until the parcels were combined. As mentioned above, we are preparing documentation for lot parcel combination.

The Plan Review Center Report - Engineering Review dated August 6, 2013, recommends approval of the revised Preliminary Site Plan and Storm Water Management Plan. All other engineering review comments discussed in the Report will be addressed at the times indicated in the Report (i.e., final site plan submission, stamping set, etc.).

The Clear Zoning review letter dated June 28, 2013, recommends approval of the revised Preliminary Site Plan. We will make the following changes, per the review letter, upon final site plan submission:

- We will be requesting a waiver from the Planning Commission of the City's same-side driveway spacing as stated in Comment 3;
- Stop sign locations will be modified as requested in Comment 6;
- Back of curb radii dimensions greater than 5' will be identified as requested in Comment 9(a); with respect to Comment 9(b) exact island dimensions and curb elevations will be addressed in a sealed civil set prior to final site plan submittal;
- The cross-hatched portion of the island will be replaced by landscaped island. Narrowest point of overlapping parking will be increased to +\-.60" wide (back to back of curb). South end of island shape will be modified to semicircle (6' radius);
- Parking Note 2 will be modified per Comment 11;
- Loading Zone Note 2 will be modified per Comment 12;
- Barrier Free Signage Detail will be added per Comment 13;
- Plan note of compliance will be added to the "Traffic Control Note" per Comment 14;
- Signage Quantity Table will be added per Comment 15.

The Revised Preliminary Landscape Review Letter dated July 30, 2013, recommends approval of the revised Preliminary Site Plan. As requested in the Letter, an irrigation plan will be submitted upon stamping set submittal.

The DRN & Associates Architects, PC, letter dated July 1, 2013, recommends approval of the facades proposed in the revised Preliminary Site Plan. A façade board has been submitted to the city as

August 20, 2013

Page 3

requested in the letter. The dumpster elevation note will be modified to indicate that enclosure will match building on the final site plan submission.

The Fire Marshal's Review letter updated August 8, 2013, recommends approval of the revised Preliminary Site Plan.

Please process this review letter in your usual manner. Should you have any questions please contact me on my mobile at 586.405.4137. Thank you!

Very truly yours,

A handwritten signature in black ink, appearing to read "M. D'Agostini", with a long horizontal flourish extending to the right.

Maria D'Agostini

SITE PLAN

MAPS
Location
Zoning
Future Land Use
Natural Features

Skyzone JSP13-21

Location

West Rd

Hu Dr

Dr

Magellan-Dr

Map Legend

Subject Property



City of Novi

Planning Division
Community Development
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org



1 inch = 208 feet

Map Author: Kristen Kapelanski
Date: 08-20-13
Project: Skyzone JSP13-21
Version #: 1.0

MAP INTERPRETATION NOTICE
Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent available sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

Skyzone JSP13-21

Zoning





Map Author: Kristen Kapelanski
 Date: 08-20-13
 Project: Skyzone JSP13-21
 Version #: 1.0

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Map Legend

Subject Property

-  I-1: Light Industrial District
-  I-2: General Industrial District

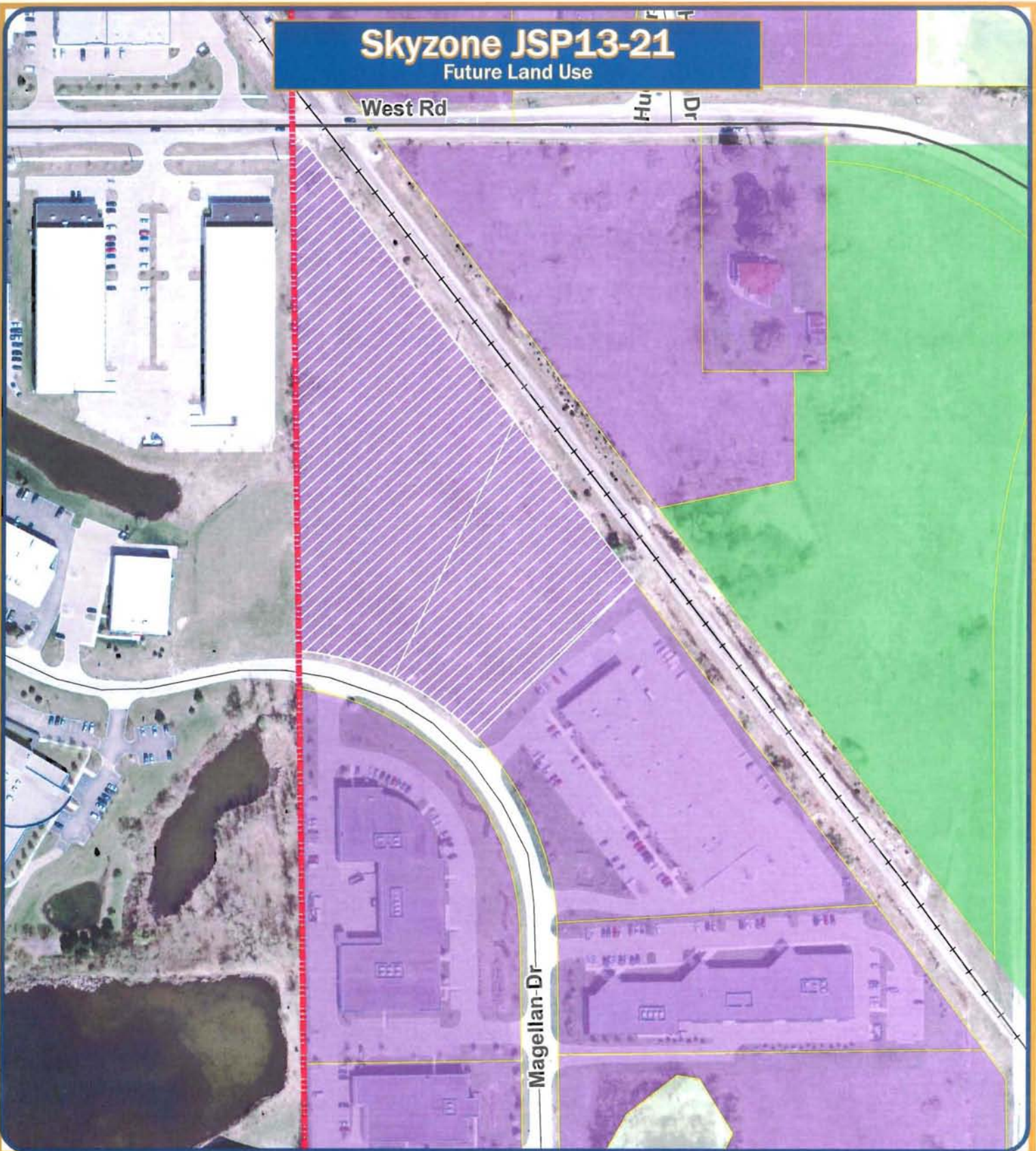


City of Novi
 Planning Division
 Community Development
 45175 W Ten Mile Rd
 Novi, MI 48375
cityofnovi.org



Skyzone JSP13-21

Future Land Use



Map Author: Kristen Kapelanski
 Date: 08-20-13
 Project: Skyzone JSP13-21
 Version #: 1.0

MAP INTERPRETATION NOTICE
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Map Legend

-  Subject Property
-  Industrial RD Tech
-  Public Park
-  Private Park



City of Novi
 Planning Division
 Community Development
 45175 W Ten Mile Rd
 Novi, MI 48375
cityofnovi.org



Skyzone JSP13-21

Natural Features



Map Author: Kristen Kapelanski
 Date: 08-20-13
 Project: Skyzone JSP13-21
 Version #: 1.0

Map Legend

-  Subject Property
-  Wetlands
-  Woodlands

MAP INTERPRETATION NOTICE

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City of Novi

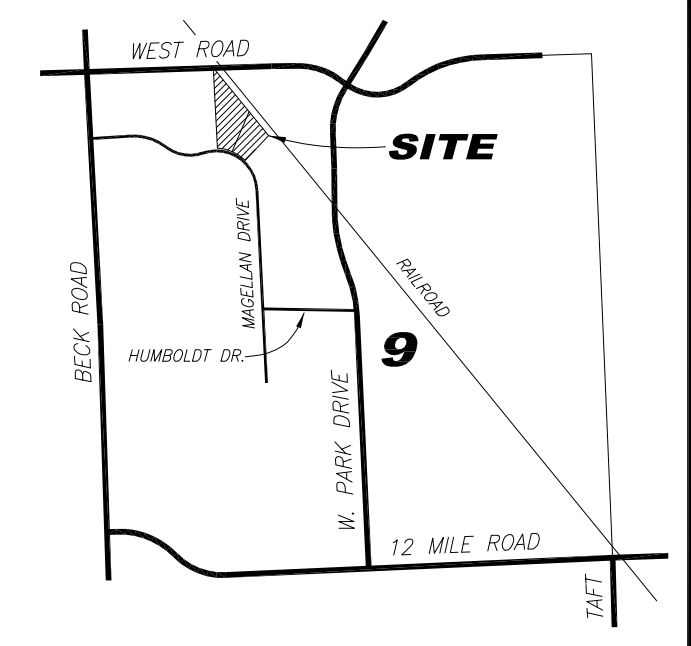
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 Community Development
 45175 W Ten Mile Rd
 Novi, MI 48375
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1 inch = 208 feet

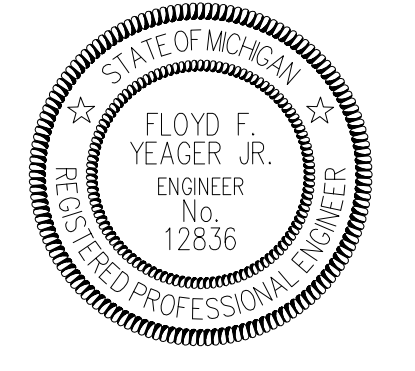
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drs./ glzg:	2,500 s.f.	30.98%
spandrat:	1,751 s.f.	21.70%
brick:	2,882	35.72%
block:	0 s.f.	0%
eifs:	935 s.f.	11.60%
siding:	0 s.f.	0%

M D I
MODE DEVELOPMENT, INC.
 38700 VAN DYKE
 SUITE 200
 STERLING HGTS, MI
 48312
 (586)977-8640
 FAX (586)977-7946



LOCATION MAP
 SCALE: 1"=200'

All Plans to comply with the 2009 Michigan Building Code, as well as conform to the current City of Novi standards and specifications.



ISSUE:

5.17.2013	Preliminary Site Plan Submittal
6.24.2013	Preliminary Site Plan Submittal

- PRELIMINARY
- APPROVAL
- PERMIT
- CONSTRUCTION

REVISIONS:

PROJECT:
**Prop. Industrial Bldg.
 Units 1 & 2
 Beck West Industrial Sub**
 JOB NO: 12.080

ADDRESS:
**Magellan Drive
 Novi, MI**

SHEET TITLE:
 Preliminary Elevations

SCALE: 3/32" = 1'-0"

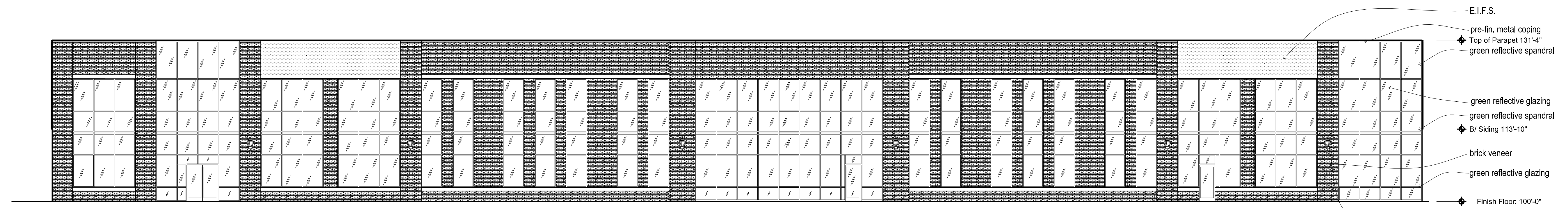
DRAWN BY: JmL/CW

CHECKED BY: FFY

SHEET:

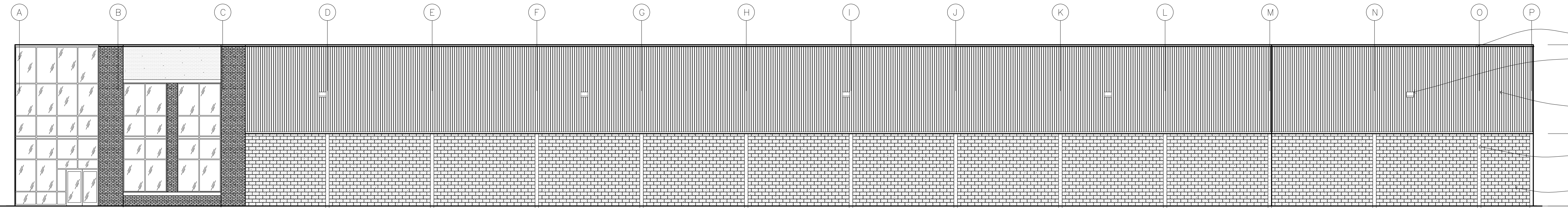
A-3

PLEASE NOTE:
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South Elevation

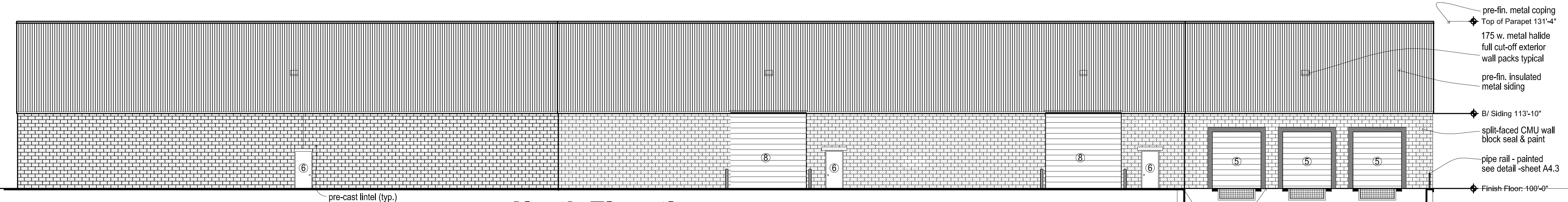
3/32"=1'-0"



East Elevation

3/32"=1'-0"

total:	8,942 s.f.	100.00%
drs./ glzg:	564 s.f.	6.31%
spandrat:	429 s.f.	4.80%
brick:	373 s.f.	4.17%
block:	3,311 s.f.	37.02%
eifs:	196 s.f.	2.19%
siding:	4,069 s.f.	45.51%

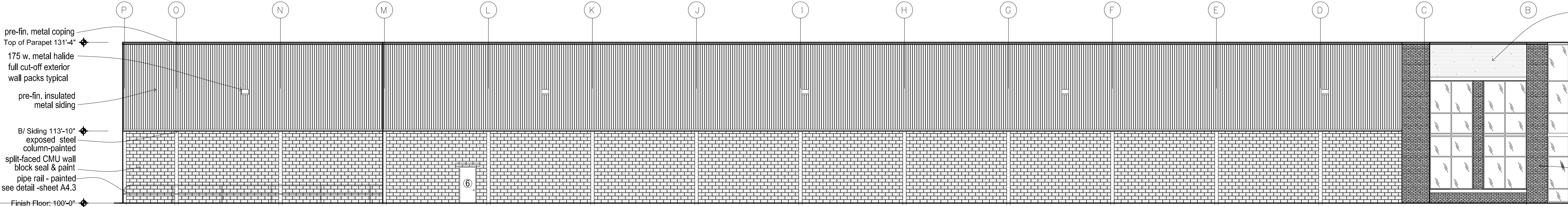


North Elevation

3/32"=1'-0"

total:	8,069 s.f.	100.00%
drs./ glzg:	700 s.f.	8.68%
spandrat:	0 s.f.	0%
brick:	0 s.f.	0%
block:	2,915 s.f.	36.12%
eifs:	0 s.f.	0%
siding:	4,454 s.f.	55.20%

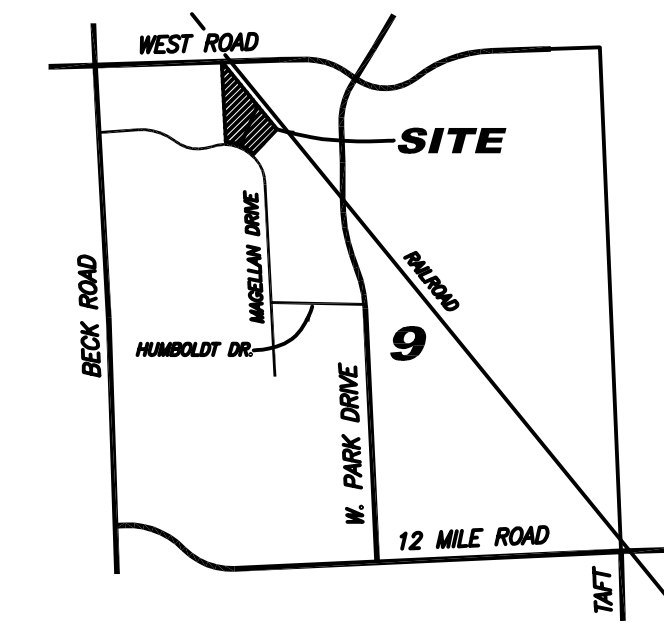
total:	8,942 s.f.	100.00%
drs./ glzg:	588 s.f.	6.58%
spandrat:	429 s.f.	4.80%
brick:	373 s.f.	4.17%
block:	3,287 s.f.	36.76%
eifs:	196 s.f.	2.19%
siding:	4,069 s.f.	45.50%



West Elevation

3/32"=1'-0"

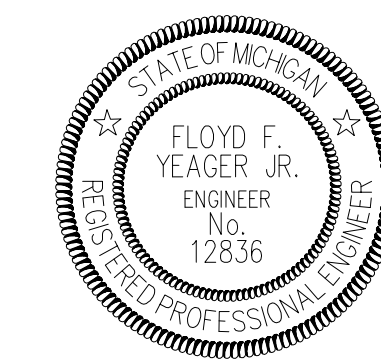
dec. lighting



LOCATION MAP

SCALE: 1"=2000'

All Plans to comply with the 2009 Michigan Building Code, as well as conform to the current City of Novi standards and specifications.



ISSUE:

5.17.2013	Preliminary Site Plan Submittal
6.24.2013	Preliminary Site Plan Submittal

- PRELIMINARY
- APPROVAL
- PERMIT
- CONSTRUCTION

REVISIONS:

PROJECT:

**Prop. Industrial Bldg.
Units 1 & 2
Beck West Industrial Sub**

JOB NO: 12.080

ADDRESS:

**Magellan Drive
Novi, MI**

SHEET TITLE:

Overall Floor Plan

SCALE: 1/16" = 1'-0"

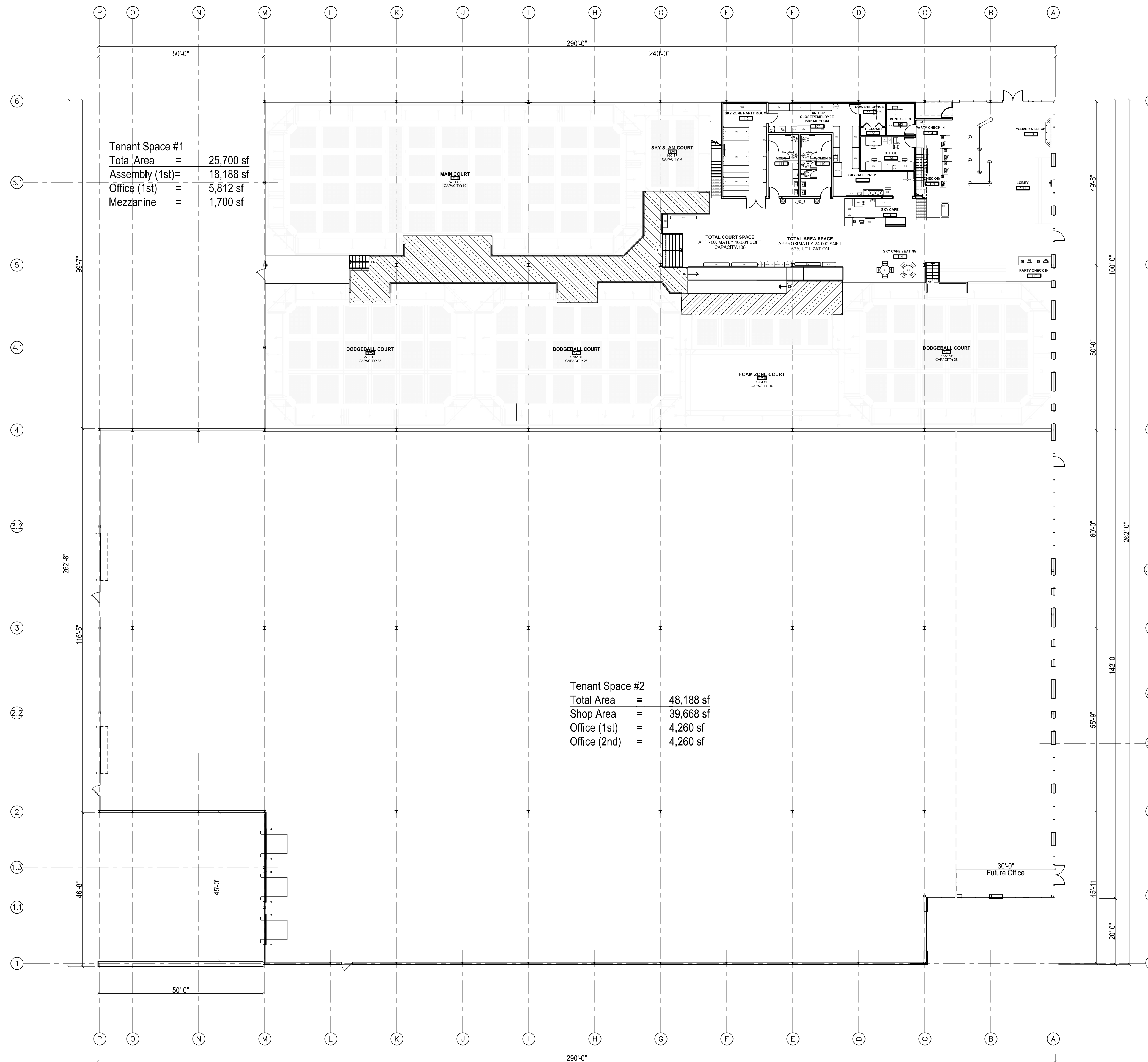
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CHECKED BY: FFY

SHEET:

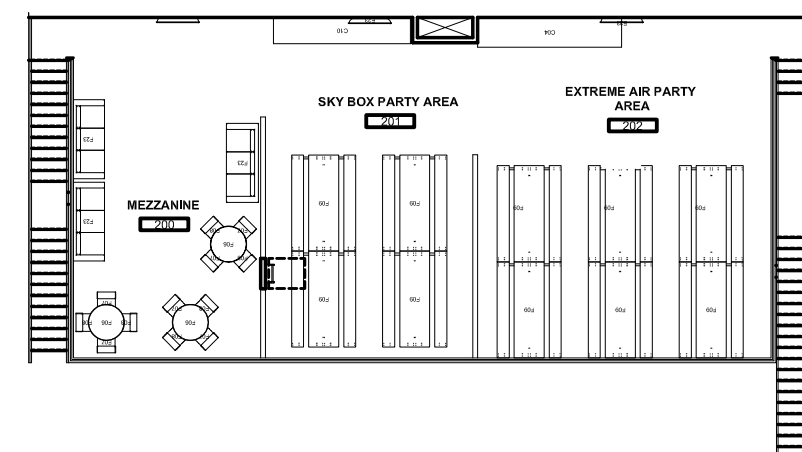
A-1

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Mode Development, Inc.



Tenant Space #1
Total Area = 25,700 sf
Assembly (1st) = 18,188 sf
Office (1st) = 5,812 sf
Mezzanine = 1,700 sf

Tenant Space #2
Total Area = 48,188 sf
Shop Area = 39,668 sf
Office (1st) = 4,260 sf
Office (2nd) = 4,260 sf



SCALE: 1/16" = 1'-0"

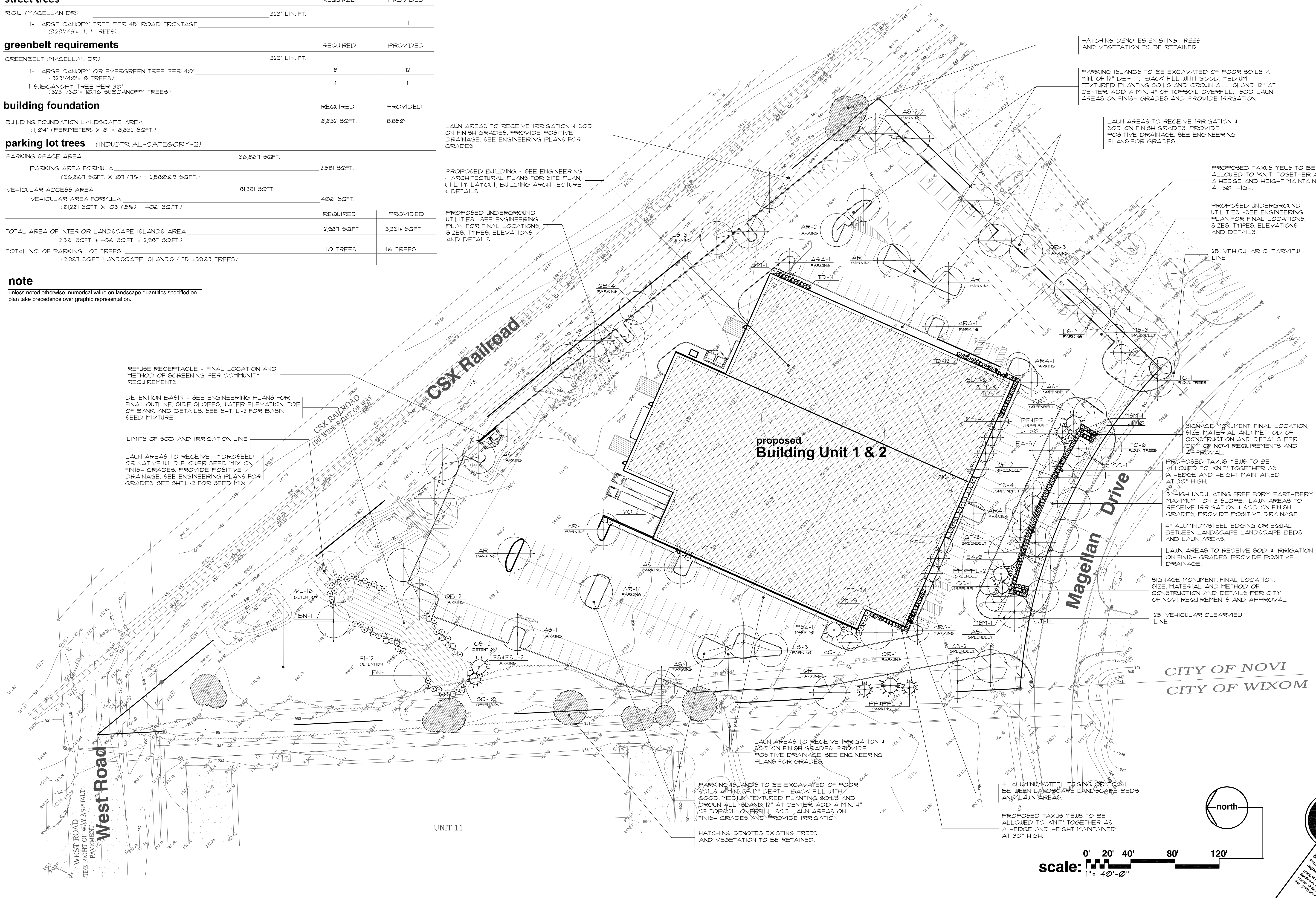
SCALE: 1/16" = 1'-0"

PLEASE NOTE:
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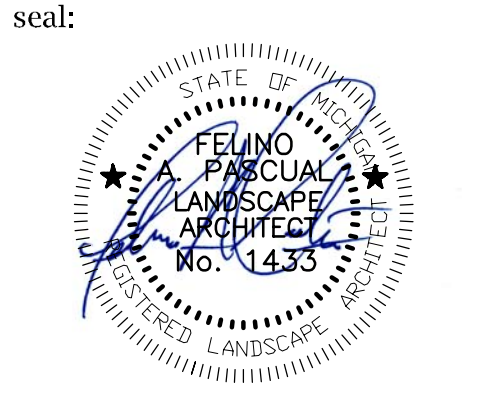
landscape requirements:

	REQUIRED	PROVIDED
street trees		
ROW (MAGELLAN DR) 323' LIN. FT.		
1- LARGE CANOPY TREE PER 45' ROAD FRONTAGE (323/45 = 7.17 TREES)	7	7
greenbelt requirements		
GREENBELT (MAGELLAN DR) 323' LIN. FT.		
1- LARGE CANOPY OR EVERGREEN TREE PER 40' (323/40 = 8 TREES)	8	12
1-SUBCANOPY TREE PER 30' (323/30 = 10.76 SUBCANOPY TREES)	11	11
building foundation		
BUILDING FOUNDATION LANDSCAPE AREA (1/4' (PERIMETER) X 8' = 8,832 SQFT.)	8,832 SQFT.	8,850
parking lot trees (INDUSTRIAL-CATEGORY-2)		
PARKING SPACE AREA 36,867 SQFT.		
PARKING AREA FORMULA (36,867 SQFT. X .01 (1%) = 2,580.69 SQFT.)	2,581 SQFT.	
VEHICULAR ACCESS AREA 81,281 SQFT.		
VEHICULAR AREA FORMULA (81,281 SQFT. X .05 (5%) = 4,064 SQFT.)	4,066 SQFT.	
	REQUIRED	PROVIDED
TOTAL AREA OF INTERIOR LANDSCAPE ISLANDS AREA (2,581 SQFT. + 4,066 SQFT. = 2,987 SQFT.)	2,987 SQFT	3,331 SQFT
TOTAL NO. OF PARKING LOT TREES (2,987 SQFT. LANDSCAPE ISLANDS / 75 = 39.83 TREES)	40 TREES	46 TREES

note
 unless noted otherwise, numerical value on landscape quantities specified on plan take precedence over graphic representation.



FELINO A. PASCUAL and ASSOCIATES, Inc.
 Community Land Planner and registered Landscape Architect
 16000 W. 9-Mile Road, Suite 520 Southfield, Michigan 48075
 ph. (248) 557-5588
 fax. (248) 557-5416



client:
MODE DEVELOPMENT, INC.
 38700 Van Dyke, Suite 200 Sterling Heights, Michigan 48312
 ph 586-977-8640

project:
Industrial Building Units 1 & 2

project location:
 Magellan Drive
 City of Novi
 Michigan

sheet title:
Landscape Improvement Plan

job no./issue/revision date:
 LS13.046.05 SPA 5-16-2013
 LS13.046.06 SPA 6-27-2013

drawn by:
CZ, JP
 checked by:
FP
 date:
5-3-2013
 notice:
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Do Not scale drawings. Use figured dimensions only

project no:
LS13.046.05

sheet no:
LS-1 of 2



quantities

plant material list

key	SHT.L-1	botanical name	common name	size	cost	totals
		LARGE AND SMALL DECIDUOUS TREES				
AS	12	ACER SACCHARUM	SUGAR MAPLE	3" BB	1400	14,800.00
AR	1	ACER R. FRANKSRED	RED SUNSET RED MAPLE	3" BB	1400	12,800.00
BN	2	BETULUS NIGRA	RIVER BIRCH (MULTI-STEM MIN. 4-CANES)	1 1/2" BB	1400	18,000.00
TC	1	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	3" BB	1400	12,800.00
LB	8	LIQUIDAMBAR STRACIFLUA	AMERICAN SWEETGUM	3" BB	1400	13,200.00
ARA	5	ACER R. ARMSTRONG	ARMSTRONG RED MAPLE	3" BB	1400	12,000.00
QB	6	QUERCUS BICOLOR	SWAMP WHITE OAK	3" BB	1400	12,400.00
QR	5	QUERCUS RUBRA	RED OAK	3" BB	1400	12,000.00
GT	4	GLEDITSIA TRI. INERMIS 'SKYCOLE'	SKYLINE LOCUST	3" BB	1400	11,600.00
CC	4	CERCIS CANADENSIS	REDBUD	2" BB	1250	11,000.00
AC	1	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY (MULTI-STEM)	2" BB	1250	12,500.00
MF	7	MALUS FLORIBUNDA	JAPANESE FLOWERING CRABAPPLE	3" BB	1250	11,750.00
PF	8	MALUS 'SNOWDRIFT'	SNOWDRIFT CRABAPPLE	2" BB	1250	12,000.00
						TOTAL 121,400.00

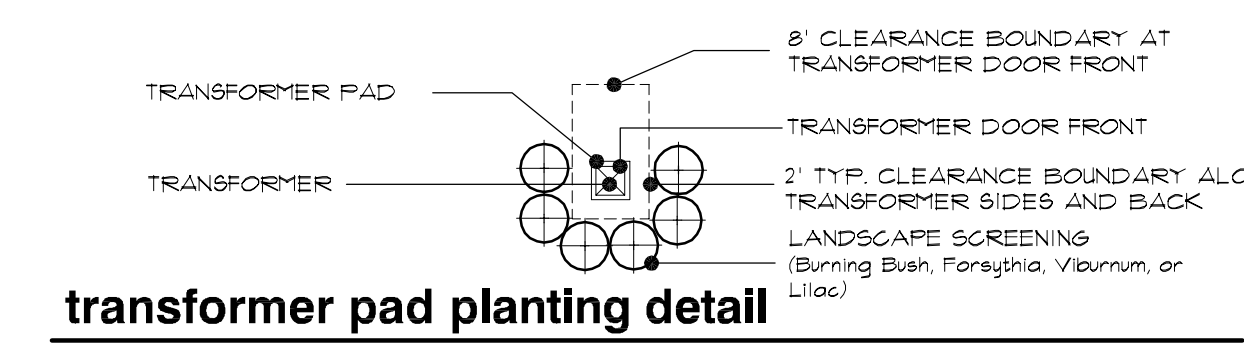
key	SHT.L-1	botanical name	common name	size	cost	totals
		SHRUBS				
SK	12	SYRINGA PATULA 'MISS KIM'	MISS KIM DWARF LILAC	3" BB	150	16,200.00
VM	11	VIBURNUM X.B. MOHAUK	MOHAUK VIBURNUM	3" BB	150	15,500.00
VL	16	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM	3" BB	150	18,000.00
VO	2	VIBURNUM OPULUS 'COMPACTUM'	COMPACT EUROPEAN CRANBERRY BUSH	3" BB	150	11,000.00
EA	6	EUONYMUS ALATUS COMPACTUS	DWARF BURNING BUSH	3" BB	150	13,000.00
FI	12	FORSYTHIA X INTERMEDIA	BORDER FORSYTHIA	3" BB	150	16,200.00
CS	12	CORNUS STOLONIFERA	REDTIG DOGWOOD	3" BB	150	16,200.00
SC	10	SAMBUCUS CANADENSIS	ELDERBERRY	3" BB	150	15,000.00
						TOTAL 140,500.00

key	SHT.L-1	botanical name	common name	size	cost	totals
		LARGE AND SMALL EVERGREENS				
JT	20	JUNIPERUS S. TAMARISCIFOLIA	TAM'S JUNIPER	2 1/2" BB	150	11,000.00
TD	121	TAXUS XM. 'DENSIFORMIS'	JAPANESE DENSE YEW	3 1/2" BB	150	16,200.00
PS	2	PINUS STROBUS	EASTERN WHITE PINE	10" BB	1400	18,000.00
PSL	1	PICEA STROBUS	EASTERN WHITE PINE	12" BB	1450	14,500.00
FP	4	PICEA FUNGENS	COLORADO SPRUCE	10" BB	1400	11,600.00
FPPL	3	PICEA FUNGENS	COLORADO SPRUCE	12" BB	1450	11,350.00
						TOTAL 11,460.00
		PERENNIALS AND GRASSES				
SLY	12	HEMEROCALLIS 'STRAWBERRY CANDY'	STRAWBERRY CANDY DAYLILY	4" CONT.	15	180.00
MHM	2	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT JAPANESE SILVER GRASS	15" CONT.	15	130.00
						TOTAL 310.00

general landscape notes:

- LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISTING CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK, CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE CONDITIONS.
- PRIOR TO BEGINNING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES, GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED BY CONTACTING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING.
- NUMERICAL VALUE ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION, VERIFY ANY CONCERN/DISCREPANCY WITH LANDSCAPE ARCHITECT.
- ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE
- IF NECESSARY, ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY CITY OF NOVI AND LANDSCAPE ARCHITECT
- ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAIL 1. SHOWN ON PLAN.
- PLANT BEDS TO BE DRESSED WITH MIN. 3" OF FINELY DOUBLE SHREDDED HARDBARK MULCH. DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM SITE.
- REMOVE ALL TWINE, WIRE AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS.
- NATURAL COLOR FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS. 4" THICK BARK MULCH FOR TREES IN 4' DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK. 3" THICK BARK MULCH FOR SHRUBS AND 2" THICK BARK MULCH FOR PERENNIALS.
- PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.
- PROVIDE PEAT SOG FOR ALL NEW AND DISTURBED LAWN AREAS UNLESS NOTED OTHERWISE.
- ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.
- PLANT TREES AND SHRUBS GENERALLY NO CLOSER THAN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS:
 - 1' SHADE TREES _____ 5 FT.
 - 2' ORNAMENTAL AND EVERGREEN TREES (CRAB, PINE, SPRUCE, ETC.) _____ 10 FT.
 - 3' SHRUBS THAT ARE LESS THAN 1 FOOT TALL AND WIDE AT MATURITY _____ 2 FT.

- NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR LOCATION AND DETAILS.
- ALL LAWN AREAS AND LANDSCAPE BEDS TO BE FULLY IRRIGATED WITH A AUTOMATIC UNDERGROUND SYSTEM. IRRIGATION SYSTEM TO HAVE SEPARATE ZONES FOR LAWN AREAS, PARKING ISLANDS, AND SHRUB BEDS WITH DIFFERENT CONTROL, MOISTURE LEVEL ADJUSTMENT PER ZONE AS REQUIRED.
- UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN TO RECEIVE EDGING. EDGING SHALL BE 4" X 1/8" METAL (FINISH BLACK OR GREEN) OR APPROVED EQUAL AND TO BE INSTALLED WITH HORIZONTAL METAL STAKES AT 32" O.C. OR PER MANUFACTURER'S SPECIFICATION.
- ALL NEW PARKING ISLANDS AND LANDSCAPE BEDS ADJACENT AND NEXT TO BUILDING SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND POOR SOILS A MIN. OF 16"-18" DEPTH. BACK FILL WITH GOOD, MEDIUM TEXTURED PLANTING SOILS. ADD A MIN. 4" OF TOPSOIL OVERFILL TO FINISH GRADE. PROVIDE POSITIVE DRAINAGE.
- WATERING OF ALL PLANTS AND TREES TO BE PROVIDED IMMEDIATELY AND MULCHING WITHIN 24 HOURS AFTER INSTALLATION.
- ALL TREE PITS TO BE TESTED FOR PROPER DRAINAGE PRIOR TO TREE PLANTING. PROVIDE APPROPRIATE DRAINAGE SYSTEM AS REQUIRED IF THE TREE FIT DOES NOT DRAIN SUFFICIENTLY.
- LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEAR BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLATION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE CITY OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.



detention basin seed mix:

- Sedge Meadow Mix: (Edge Zone)**
A mix of sedges, grasses and wildflowers recommended for soils that are saturated during most of the growing season. Use just above the normal waterline in the capillary zone in our Lake Erie Enhancement System.
- Carex comosa (Bristly Sedge)
 - Carex crispatella (Crested Sedge)
 - Carex frankii (Frank's Sedge)
 - Carex hystericina (Porcupine Sedge)
 - Carex lurida (Lurid Sedge)
 - Carex stipitata (Awk-Fruited Sedge)
 - Carex tibialis (Pointed Oval Sedge)
 - Carex vulpinoidea (Fox Sedge)
 - Elymus virginicus (Virginia Wild Rye)
 - Glycine striata (Fowl Manna Grass)
 - Lycoria ozarkotica (Pine Cat Grass)
 - Panicum virgatum (Switchgrass)
 - Scirpus atrovirens (Dark Green Bulrush)
- 112
- Forbs oz-acre**
Aster subcordatum (Water plantain)
Angelicca atropurpurea (Angelica)
Aster novae-angliae (New England Aster)
- Components per acre**
Sedge Meadow 8 lbs grasses and sedges, 3 lbs forbs
- annual cover: (Edge, Upland & Dry Upland Zones)**
50% Temporary Grasses: will contain two of the following species.
Seed Oats
Annual Rye
Winter Wheat
American Slough Grass
- Aster puniceus (Swamp Aster)
 - Aster umbellatus (Flat-topped Aster)
 - Cassia hebecarpa (Wild Senna)
 - Eupatorium maculatum (spotted Joe-Pye Weed)
 - Eupatorium perfoliatum (Bonset)
 - Helianthus autumnalis (Autumn Sneezewood)
 - Liatris spicata (Dense Blazing Star)
 - Lobelia cardinalis (Cardinal Flower)
 - Lobelia siphilitica (Great Blue Lobelia)
 - Pensilvianum digitale (Froglove/Bonsetrago)
 - Pyrocnemum virginicum (Mountain Mint)
 - Rudbeckia fulgida speciosa (Showy Black-Eyed Susan)
 - Rudbeckia hirta (Black-Eyed Susan)
 - Rudbeckia subtomentosa (Sweet Black-Eyed Susan)
 - Silphium integrifolium (Rosweed)
 - Silphium perfoliatum (Cupplant)
 - Silphium terebinthinaceum (Prairie Dock)
 - Solidago patula (White False Indigo)
 - Solidago rotundifolia (Rattlesnake Master)
 - Verbena hastata (Blue Vervain)
 - Vernonia fasciculata (Smooth Ironweed)
 - Vernonia virginicum (Culver's Root)
 - Zizia aurea (Golden Alexander)
- 48
- 50% Temporary Grasses:** will contain at least four of the following species.
Antropogon gerardii (Big Bluestem)
Carex blawnellii (Copper Oval Sedge)
Elymus canadensis (Canada Wild Rye)
Panicum virgatum (Switchgrass)
Schizachyrium scoparium (Little Bluestem)
Sorghastrum nutans (Indian Grass)
- 20% Native Wildflowers:** will contain at least fourteen of the following species:
Aster novae-angliae (New England Aster)
Aster pilosus (Heath Aster)
Coreopsis tripteris (Tall Coreopsis)
Baptisia leucantha (White False Indigo)
Echinacea purpurea (Purple Coneflower)
Eryngium yuccifolium (Rattlesnake Master)
Helicopsis helianthoides (Ox Eye Sunflower)
Liatris aspera (Rough Blazing Star)
Liatris spicata (Dense Blazing Star)
Monarda fistulosa (Bergamot)
Physostegia virginiana (Obedient Plant)
Pycnanthemum virginianum (Mountain Mint)
Ratibida pinnata (Yellow Coneflower)
Rudbeckia hirta (Black-Eyed Susan)
Rudbeckia laciniata (Green-headed Coneflower)
Silphium terebinthinaceum (Prairie Dock)
Solidago altissima (Tall Goldenrod)
Solidago grammifolia (Long-leaved Goldenrod)
Solidago rigida (Stiff Goldenrod)
Tradescantia chinensis (Spiderwort)
Verbena unicifolia (White Vervain)

SOURCE:
NATIVESCAPE LLC
P.O. BOX 122
MANCHESTER, MICHIGAN 48158
ph: 517.456.9646
www.nativescape.net

landscape maintenance notes:

- THE OWNER OF THE PROPERTY SHALL BE RESPONSIBLE FOR ALL MAINTENANCE OF SITE LANDSCAPING, AS FOLLOWS:
- LANDSCAPE MAINTENANCE PROCEDURES AND FREQUENCIES TO BE FOLLOWED SHALL BE SPECIFIED ON THE LANDSCAPE PLAN, ALONG WITH THE MANNER IN WHICH THE EFFECTIVENESS, HEALTH AND INTENDED FUNCTIONS OF THE VARIOUS LANDSCAPE AREAS ON THE SITE WILL BE ENSURED.
 - LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.
 - PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.
 - ALL DEAD OR DISEASED PLANT MATERIAL SHALL BE REMOVED AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1 AND FROM OCTOBER 1 UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE.
 - THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD AND INTERNAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED IN ACCORDANCE WITH THE ABOVE-MENTIONED PROCEDURES, ANY REVISIONS TO OR REMOVAL OF PLANT MATERIALS WILL PLACE THE PARCEL IN NON-COMFORMITY WITH THE APPROVED LANDSCAPE PLAN AND SHALL BE VIEW AS A VIOLATION OF THIS ORDINANCE AND THE AGREED UPON TERMS OF THE FINAL SITE PLAN APPROVAL.

cost estimate summary

TOTAL ESTIMATED PLANT MATERIALS COST	142,085.00
TOTAL ESTIMATED IRRIGATION COST	13,500.00
TOTAL ESTIMATED SOG COST	12,000.00
TOTAL ESTIMATED SEEDING COST	1,500.00
TOTAL MISG. ITEM COST (MULCH, EDGING, FABRIC, ETC.)	11,000.00
TOTAL ESTIMATED LANDSCAPE COST	161,265.00

FELINO A. PASCUAL and ASSOCIATES, Inc.

Community Land Planner and
Professional Landscape Architect
1080 CEDAR ST. #418, Suite 520
Southfield, Michigan 48075
seal:

client:
MODE DEVELOPMENT, INC.
38700 Van Dyke, Suite 200
Sterling Heights, Michigan 48312
ph 586-977-8640

project:
Industrial Building Units 1 & 2

project location:
Magellan Drive
City of Novi
Michigan

sheet title:
plant material list and details

job no./issue/revision date:
LS13.046.05 SPA 5-16-2013
LS13.046.06 SPA 6-27-2013

drawn by:
CZ, JP

checked by:
FP

date:
5-3-2013

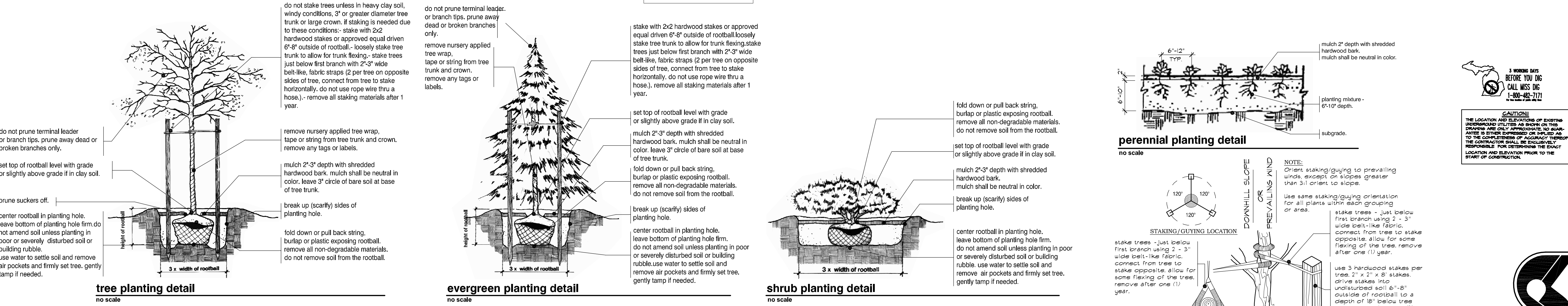
notice:
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Do not scale drawings. Use figured dimensions only

project no:
LS13.046.05

sheet no:
LS-2 of 2



Plant Material List, Planting Details and Notes

CALVIN HALL
Professional Engineer
No. 10419
10000 Woodward Ave., Suite 200
Livonia, MI 48150
Tel: 586-428-1000
Fax: 586-428-1001
www.chhall.com

Owner: D'Agostini Land Co.
38700 Van Dyke suite 200
Sterling Heights, MI 48312

Applicant: Mode Development, Inc.
38700 Van Dyke suite 200
Sterling Heights, MI 48312

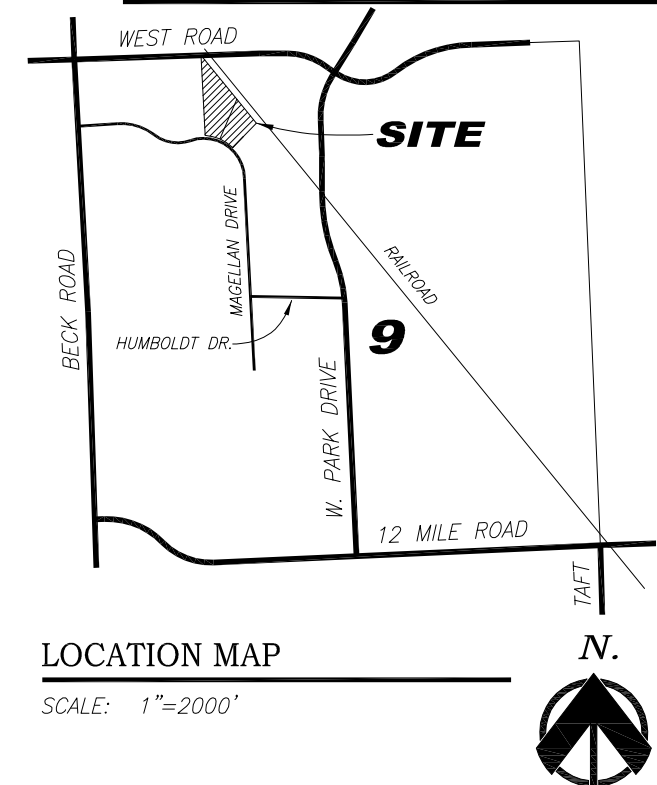
Engineer: Yeager Engineering, Inc.
5080 Abington
Troy, MI 48065

38700 VAN DYKE
SUITE 200
STERLING HTGS, MI
48312

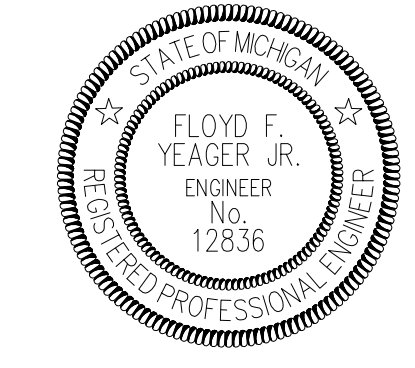
(586)977-8640
FAX (586)977-7946

Front Landscape Calc's.:

Total Area:	37,632 s.f. = 100%
Green/ Landscape:	17,370 s.f. = 46%
Paving/Curbs:	16,590 s.f. = 44%
Parking Spaces:	3,672 s.f. = 10%



All Plans to comply with the 2009 Michigan Building Code, as well as the City of Novi Standards as adopted.



ISSUE:

5.17.2013	Preliminary Site Plan Submittal
6.24.2013	Preliminary Site Plan Submittal

- PRELIMINARY
- APPROVAL
- PERMIT
- CONSTRUCTION

REVISIONS:

PROJECT:

JOB NO:
12-
ADDRESS:

SHEET TITLE:
Preliminary Site Plan

SCALE: 1"=40'-0"

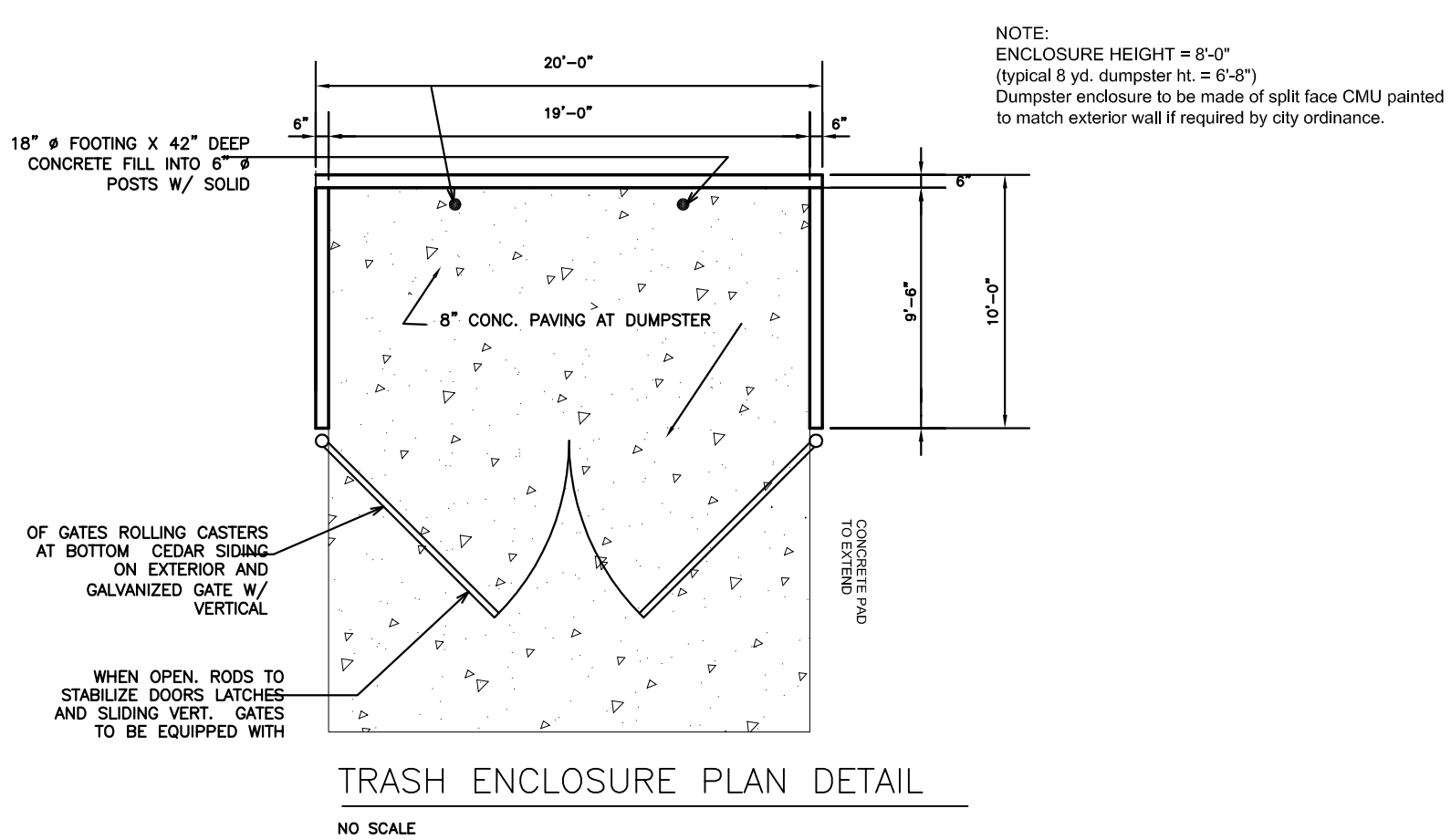
DRAWN BY: JmL/CW

CHECKED BY: FFY

SHEET:

SP-2

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Mode Development, Inc.



Parking Requirements:

Assembly side:	*220 Occupants / 2	110 spaces required
Industrial:	39,698 s.f. / 700	57 spaces required
Office:	8,500 s.f. / 222	38 spaces required
		205 spaces required
		230 spaces provided

- Parking Notes: * by affidavit
- 1) All parking spaces are dimensioned to face of curb.
 - 2) All undesignated (non-barrier free) parking spaces will be white.
 - 3) All barrier-free parking space stripes and access aisle crosshatching will be blue.
 - 4) Abutting barrier-free and non barrier-free parking spaces will be separated by abutting blue and white stripes.
 - 5) The International Symbol of Accessibility (wheelchair symbol) appearing in each designated space will be white.

- Loading Zone Notes:
- 1) All loading zones should be bordered and cross hatched at 4'-0" spacing with yellow paint.
 - 2) No parking Loading Zone signage shall be at a typical mounting height on adjacent building facade.

PROPERTY DESCRIPTION: (COMMITMENT NO. 5-461662)

PARCEL NO. 22-09-176-016 AND PARCEL NO. 22-09-176-017
A PART OF THE NORTHWEST 1/4 OF SECTION 9, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 9; THENCE NORTH 07 DEGREES 53 MINUTES 26 SECONDS EAST 1324.77 FEET ALONG THE NORTH LINE OF SAID SECTION 9 AND THE CENTERLINE OF WEST ROAD TO THE POINT OF BEGINNING; THENCE SOUTH 39 DEGREES 10 MINUTES 35 SECONDS EAST 912.29 FEET; THENCE SOUTH 43 DEGREES 48 MINUTES 57 SECONDS WEST 363.51 FEET; THENCE 323.11 FEET ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 460.00 FEET, A CENTRAL ANGLE OF 40 DEGREES 14 MINUTES 42 SECONDS AND A CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 20 MINUTES 24 SECONDS WEST 316.51 FEET; THENCE NORTH 02 DEGREES 51 MINUTES 51 SECONDS WEST 836.46 FEET TO THE POINT OF BEGINNING.

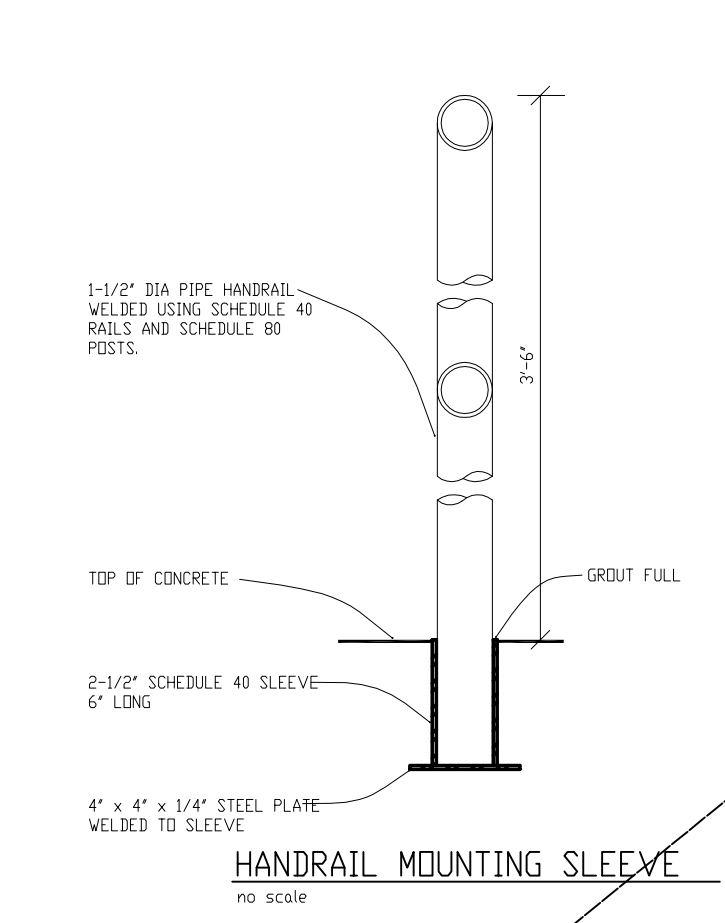
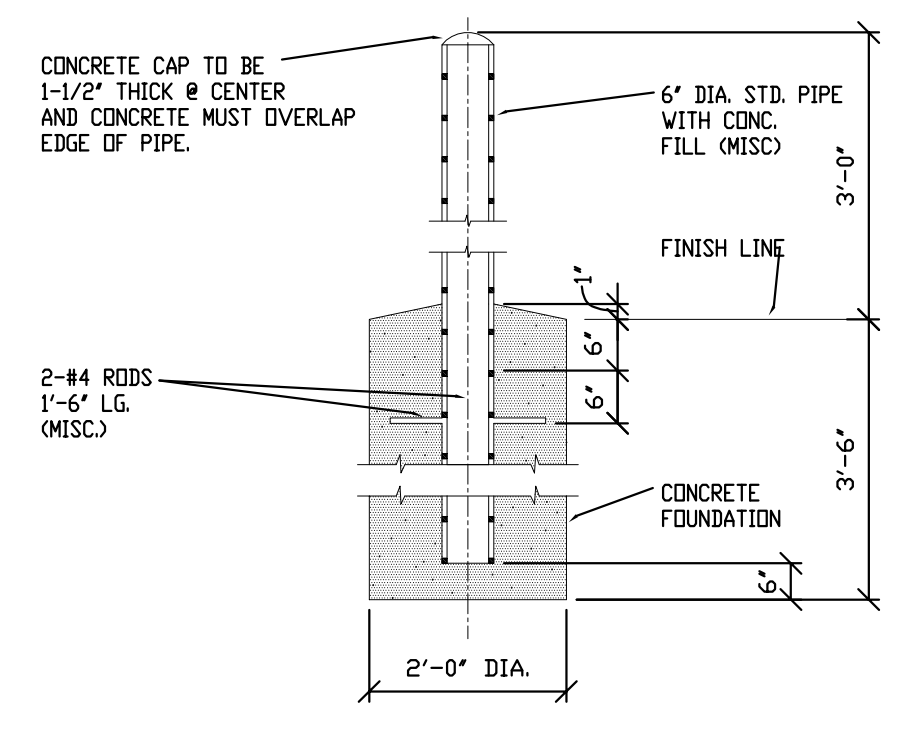
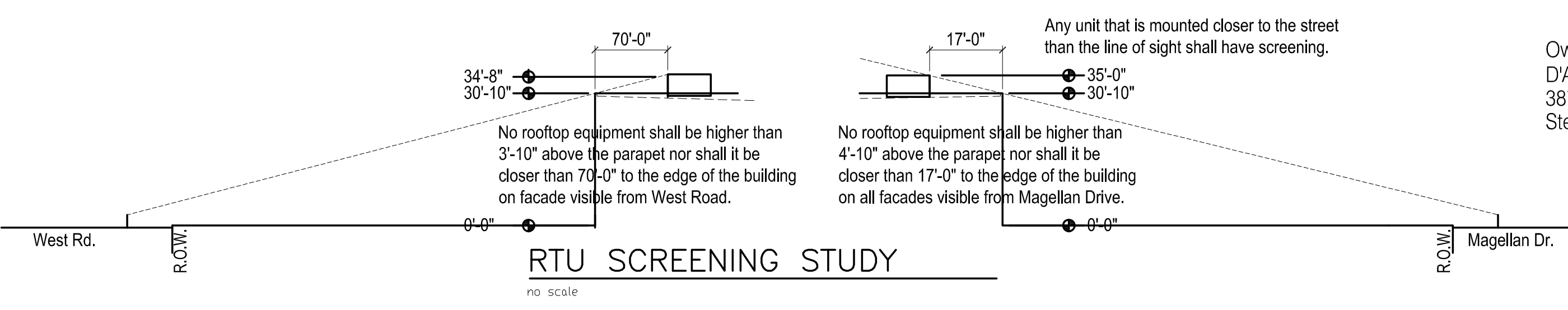
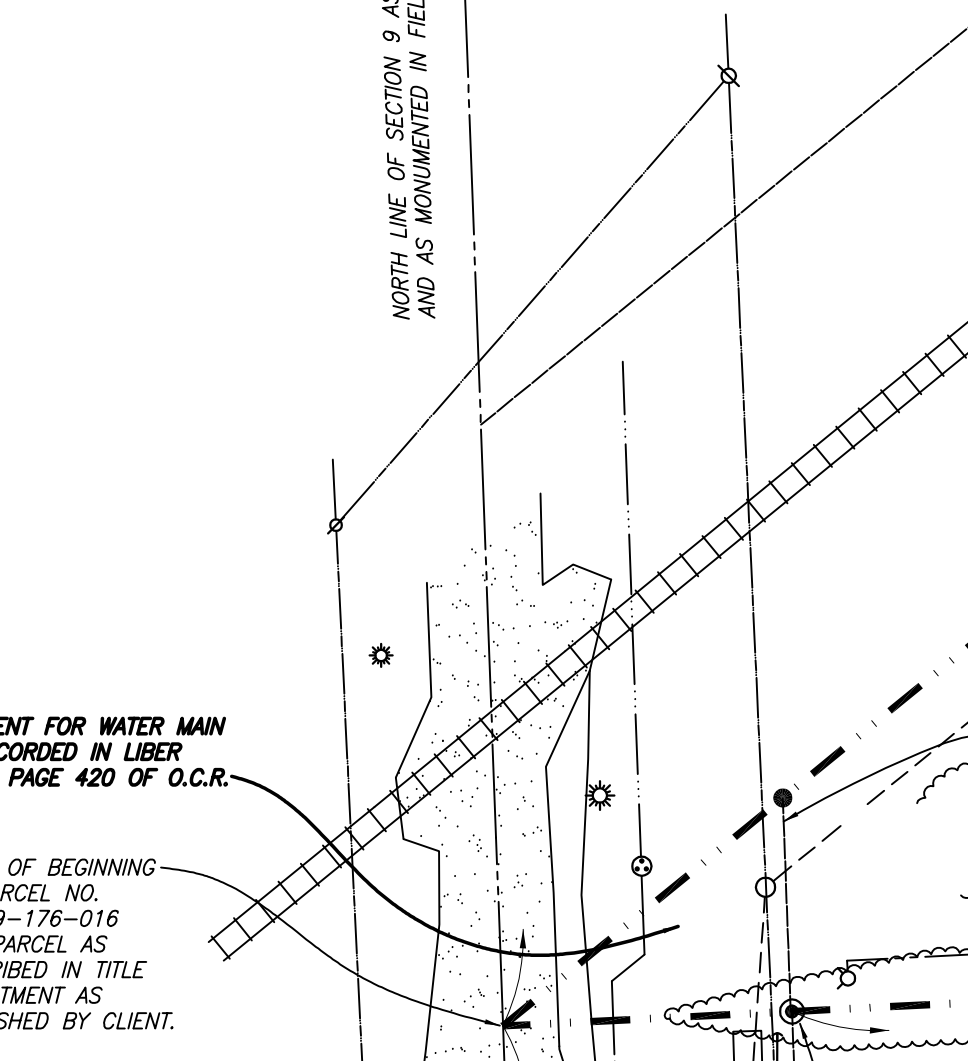
PARCEL AREA

PARCEL NO. 22-09-176-016
(INCLUDING WEST ROAD RIGHT OF WAY)
TOTAL = 180,693.1 SQUARE FEET = 4.15 ACRES

PARCEL NO. 22-09-176-017
TOTAL = 91,815.7 SQUARE FEET = 2.11 ACRES

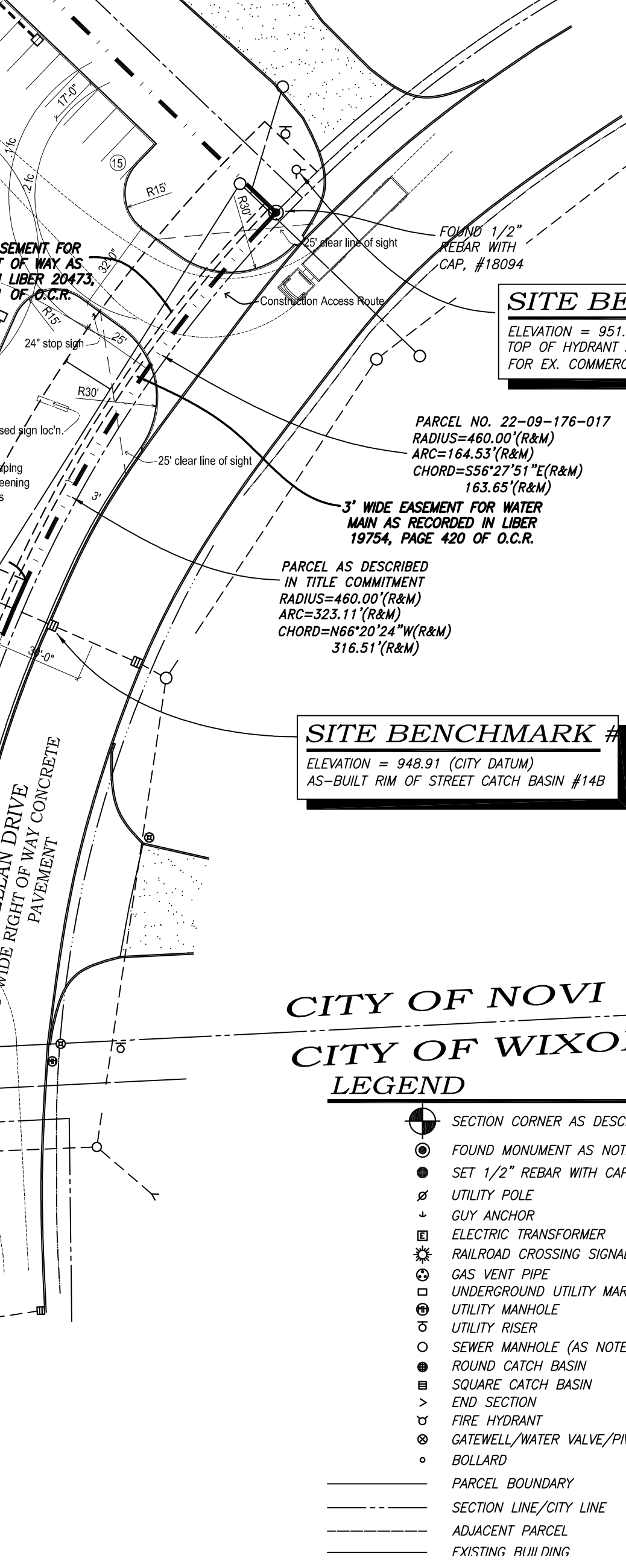
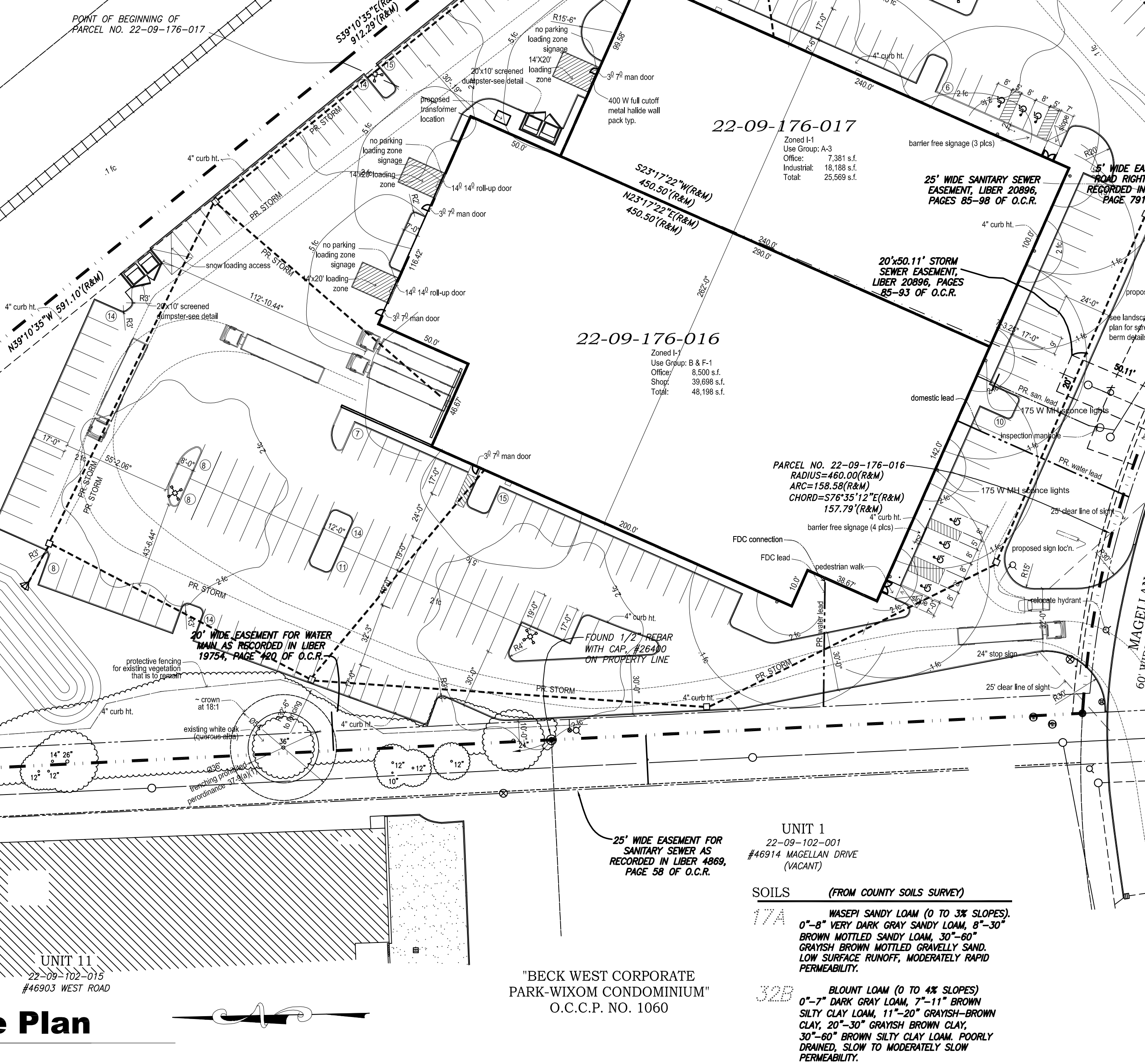
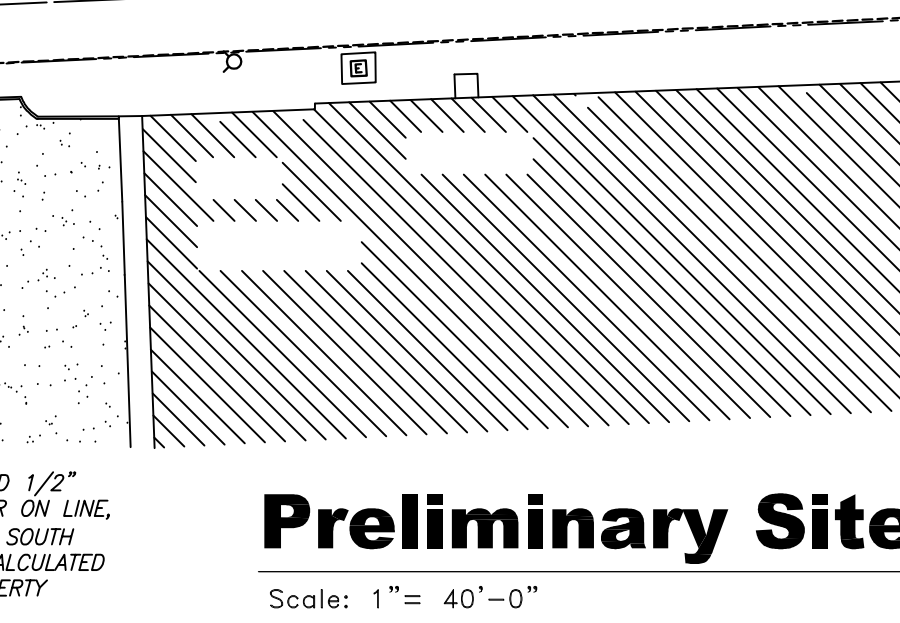
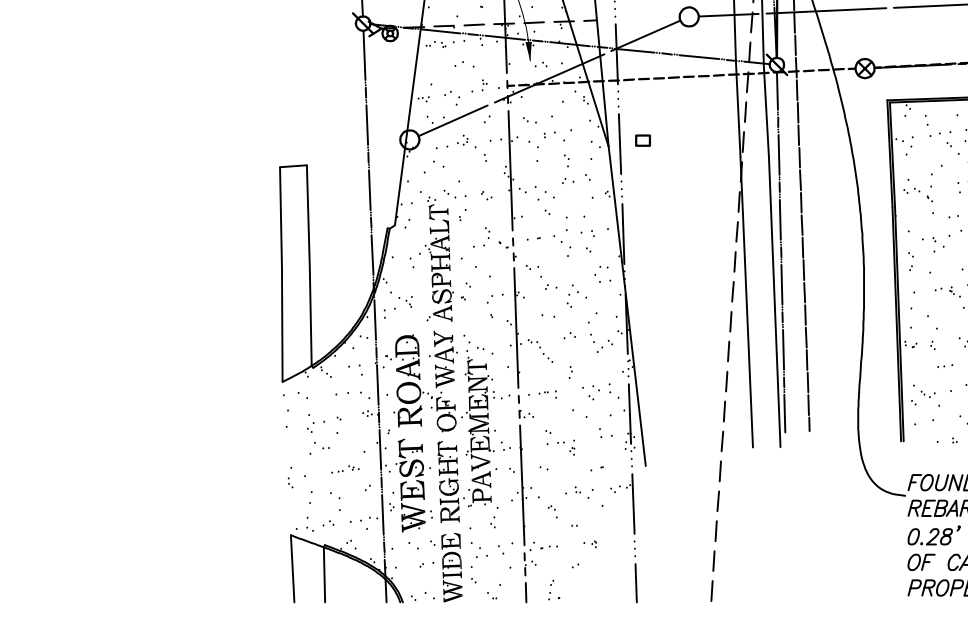
BASIS OF BEARING

NORTH 1/4 CORNER OF SECTION 9,
TOWN 1 NORTH, RANGE 8 EAST,
CITY OF NOVI, OAKLAND COUNTY,
MICHIGAN. FOUND 1/2" REBAR.



NO SCALE
NOT FOR HYD. GUARD POSTS.

NO SCALE



"BECK WEST CORPORATE
PARK-WIXOM CONDOMINIUM"
O.C.C.P. NO. 1060

SOILS (FROM COUNTY SOILS SURVEY)

17A WASEPI SANDY LOAM (0 TO 3% SLOPES),
0"-8" VERY DARK GRAY SANDY LOAM, 8"-30"
BROWN MOTTLED SANDY LOAM, 30"-60"
GRAYISH BROWN MOTTLED GRAVELLY SAND,
LOW SURFACE RUNOFF, MODERATELY RAPID
PERMEABILITY.

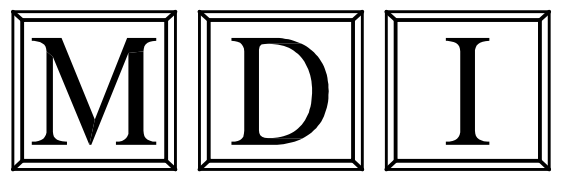
32B BLOUNT LOAM (0 TO 4% SLOPES)
0"-2" DARK GRAY LOAM, 2"-11" BROWN
SILTY CLAY LOAM, 11"-20" GRAYISH-BROWN
CLAY, 20"-30" GRAYISH BROWN CLAY,
30"-60" BROWN SILTY CLAY LOAM, POORLY
DRAINED, SLOW TO MODERATELY SLOW
PERMEABILITY.

**CITY OF NOVI
CITY OF WIXOM
LEGEND**

- SECTION CORNER AS DESCRIBED
- FOUND MONUMENT AS NOTED
- ⊕ SET 1/2" REBAR WITH CAP #46724
- ⊕ UTILITY POLE
- ⊕ GUY ANCHOR
- ⊕ ELECTRIC TRANSFORMER
- ⊕ RAILROAD CROSSING SIGNAL LIGHT
- ⊕ GAS VENT PIPE
- ⊕ UNDERGROUND UTILITY MARKER
- ⊕ UTILITY MANHOLE
- ⊕ UTILITY RISER
- ⊕ SEWER MANHOLE (AS NOTED)
- ROUND CATCH BASIN
- ⊕ SQUARE CATCH BASIN
- ⊕ END SECTION
- ⊕ FIRE HYDRANT
- ⊕ GATEWELL/WATER VALVE/PV
- BOLLARD
- PARCEL BOUNDARY
- - - SECTION LINE/CITY LINE
- ADJACENT PARCEL
- EXISTING PAVING

Preliminary Site Plan

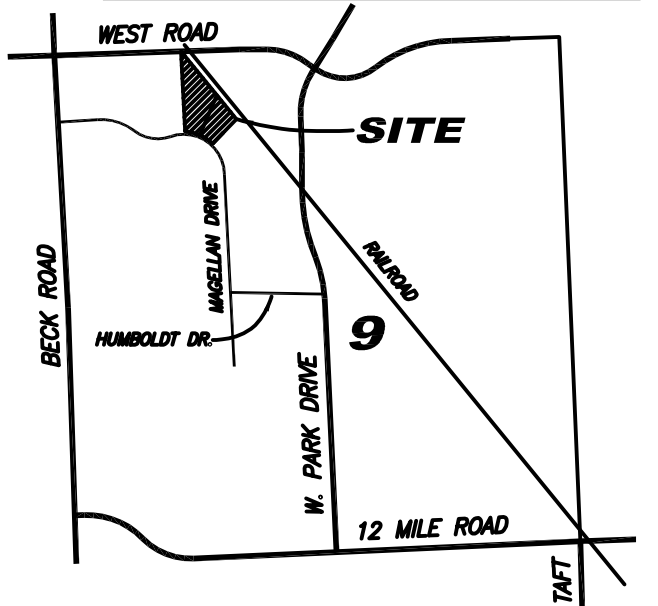
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MODE DEVELOPMENT, INC.

38700 VAN DYKE
SUITE 200
STERLING HTGS, MI
48312

(586)977-8640
FAX (586)977-7946



LOCATION MAP
SCALE: 1"=2000'

All Plans to comply with the 2009 Michigan Building Code, as well as the City of Novi Standards as adopted.

Project: SKYZONE - NOVI
Date: 06/24/13

WEIGHTED "C" VALUE

TOTAL AREA OF SITE	A =	6.25 ACRES
		272,250 SQ.FT.
AREA OF BUILDING AND PAVEMENT	A _{b,p} =	189,855 SQ.FT.
	C _{b,p} =	0.95
AREA OF LAWN	A _l =	82,395.00 SQ.FT.
	C _l =	0.35
CAVG =	C _{AVG} = (A _{b,p} / A) x C _{b,p} + (A _l / A) x C _l =	0.77

SEDIMENT FOREBAY CALCULATIONS

ALLOWABLE DISCHARGE	C1 =	0.15 CFS/ACRE
TIME INITIAL	t =	20.00 MINUTES
AREA	A =	6.25 ACRES
RUNOFF COEFF	C =	0.77
TOTAL STORAGE REQUIRED	VT = 1815 x A x C =	8716.69 CU.FT.
STORAGE HEIGHT PROVIDED	H =	4.00 FEET
TOP AREA OF BASIN	AREA OF CONTOUR A1 =	5290.00 SQ.FT.
BOTTOM AREA OF BASIN	AREA OF CONTOUR A2 =	591.00 SQ.FT.
TOTAL STORAGE VOLUME PROVIDED	V = ((A1 + A2 + SQR(A1 x A2)) x H / 3 =	10198.88 CU.FT.

Note: Complete set of civil drawing prepared by licensed engineer will be submitted for final site plan approval.

ISSUE:

6.24.2013 Preliminary Site Plan Submittal

- PRELIMINARY
- APPROVAL
- PERMIT
- CONSTRUCTION

REVISIONS:

PROJECT:

**Prop. Industrial Bldg.
Units 1 & 2
Beck West Industrial Sub**

JOB NO:

12-080

ADDRESS:

Magellan Drive
Novi, MI

SHEET TITLE:

Storm Water Management Plan

SCALE: 1"=40'-0"

DRAWN BY: JmL/CW

CHECKED BY: FFY

SHEET:

SP-2.1

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